

THE TIMES

Educational Supplement

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...lost a leg at Waterloo...

A misty future at the end of the line? The view from the Department of Education and Science at the beginning of 1976 must be more than usually clouded. As Mr Mulley surveys the scene from Elizabeth House the lines all seem to point in the same direction—a sustained period of restraint on spending, smaller age-groups, more teachers than jobs—but they cross and recross in a signalman's nightmare. If the light is green at the moment, how long will it stay that way?

What the education service needs badly is confidence—confidence to plan within available resources, whatever they are. What it has, instead, is the expectation of cuts followed by more cuts; and this unpleasant sequence will vary locally according to the vagaries of the Rate Support Grant formula and the state of the parties. Some time next month there will be the Public Expenditure White Paper to tell how the Chancellor's cuts for 1978-80 are to be shared out (including the £500m lopped off earlier forecasts of education spending). The reality will be, at the same time, not so bad as this suggests and worse: not so bad, because some of the cut can be explained by lower forecasts of demand in higher education and the continuing fall in the birthrate; worse because each year of acute stringency cuts a little deeper into the bone.

There is also a great unreality about notional cuts made two years ahead. Historically, the figures in previous White Papers have not borne any very close relationship to what happens in practice. It must be seriously wondered if members of the Cabinet who trade £100m of education for £50m of defence and a few thousand council houses, have any very serious knowledge of how their decisions will work out in practice. They can get enough agreement to get the train on the rails and the Chancellor can wave his green flag, and the engine can pull out of Waterloo station. But how many times it will stop at signals, which points will fall, into what branch lines it will get diverted—all these lie in the future wrapped in the uncertainties which provide the raw materials of politics.

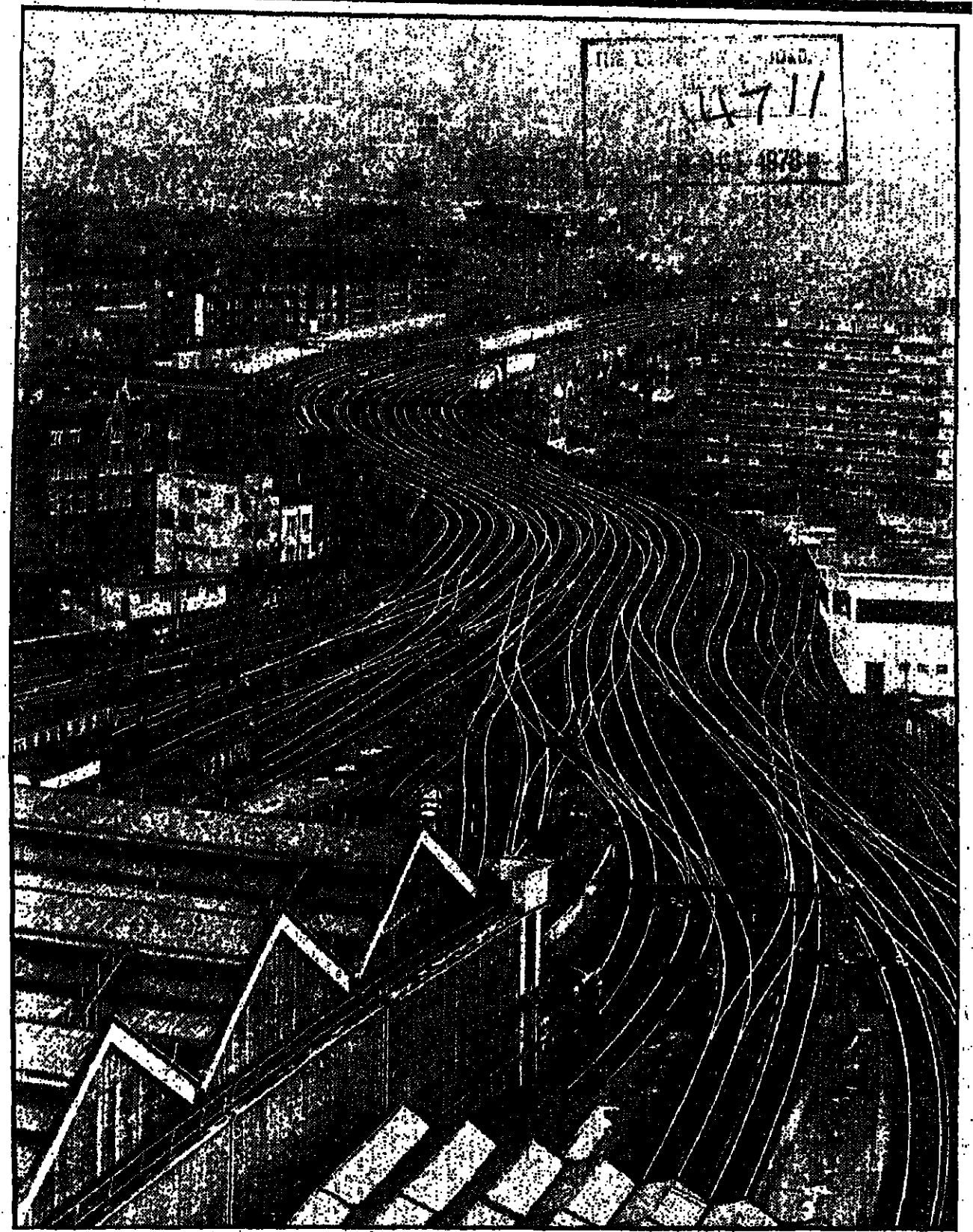
If a continuing concern with housekeeping matters is going to bear heavily on 1976, it is going to be of the utmost importance to see that this does not hog the whole of the stage. This looks like being a year in which the curriculum comes to the fore and, perhaps, a year in which the teachers' grip on the curriculum is challenged, if only tentatively, by other members of the community. In particular, the secondary school curriculum comes under scrutiny because decisions have to be taken about two major examinations. These will affect the shape of secondary education for years to come and, with what over is eventually proposed to replace A level, they represent the most substantial work which the Schools Council have undertaken.

So far the only people who have contributed significantly to the debate have been the teachers and the rest of the educational establishment. The final decisions will lie with the Secretary of State, who must wonder why strategic decisions of this kind should be prepared only by the professional group whose work will be monitored by this examination system. Mr Mulley will not lack advice to submit this professional consensus (if it exists) to wider scrutiny. If he does so, nobody should cry "foul"—they should welcome the opportunity to convince a wider constituency, and the chance to improve their own understanding by being forced to take account of other insights.

If somewhere along the line they have to negotiate some far-from-level crossings and a few stop signals, this would be no tragedy if it helped to reestablish the public character of this curricular debate.

No comment

Mr John D. Pearson, committee chairman, said voters should be pleased with the statistics, for they showed that the average spent less, per capita, on education than any other country in the world—based on a report in the *Financial Times* and *Castleford Express*.



Photographer Ric Gemmell's picture from the roof of Elizabeth House, headquarters of the DES, looking over Waterloo.

A peerage for life Sir Alan Bullock, who was responsible for <i>A Language for Life</i> , the report on reading standards, has been given a life peerage in the New Year's honours list. page 3	'Tyndale a mess when I came' Mr Terry Ellis, head of the contentious London Junior school, gives his own evidence at the inquiry. Mark Jackson reports. page 4	Year of the rich teacher Harry Judge reviews 1975, the year when teachers got rises and the service as a whole got cuts. page 2	Imperial hangover? Should the Ministry of Defence spend more than £2 million a year on cadet corps in schools? page 14
Post-Chrysler depression Labour MP John Mackintosh says it is madness to spend £162.5m rescuing Chrysler while cutting back on money for education. page 2	What to do with 16-19s Oxfordshire is one of the few LEAs to make a systematic assessment of how to plan for the 16-19 age group. A report on their conclusions. John Gretton. page 6	Science, page 13 John Maddox disposes a rare virus which may be responsible for many mental defects. Talkback, page 28	On an experimental video copying service; Elsie M. Ayles on a new Religious Education centre at Canterbury. Talkback, page 28
TES Extra: US bicentennial Celebrating the American Revolution of 1776. pages 17-24	Locomotiv GT Frank Lipsius on rock in Hungary. page 16	Books, pages 25 and 26 Colin MacInnes on Chinese history; Geoffrey Parkinson on juvenile crime; Maurice Hennessy on Irish education; Maevie Heran on rape. Resources, page 27	Arminia Wordsworth on film books; Carolyn O'Grady reviews Richard Cork's new film on the Vorticist movement. Leader, page 2; Personal Column, page 4; In brief, page 12; Sport, page 32; Buckley, crossword, maths teaser, page 30.
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Any institution for 16 to 19-year-olds—schools, sixth form colleges, tertiary colleges or colleges of further education—should have at least 150 students. There should also be a single system to plan, coordinate, guide and pay for education for this age group.

These are the main recommendations of an Oxfordshire working party report on 16 to 19 education. They are based on a careful assessment of the educational needs of the students and a realistic assessment of the financial constraints within which any educational policy must operate.

The existing service throughout the county has been analysed, and in each area a number of options listed, with comments from the working party.

Although specific recommendations are not made, the report is bound to create something of a political uproar. Its conclusions imply that a number of small sixth forms will disappear and other cherished plans will be cancelled.

The working party, which included heads of schools and representatives from further education, was jointly chaired by Mr John Thorne and Mr Eric Dyke, principal education officers respectively for schools and further education.

The tenor of their report—which is addressed to the chief education officer and has not yet been accepted by council—is to put what they see as the interests of the students before those of the institutions.

At present, provision for 16 to 19-year-olds throughout the county is varied. There are five colleges of further education, one sixth-form college which is associated with one of these colleges, and 30 sixth forms in schools.

In the city of Oxford eight upper schools enter for 735 sixth-formers (though in some cases the new comprehensive intake has not yet worked its way through). In the western and eastern parts of the county there is haphazard provision. In the north and south there are centres for advanced studies based on a "nursery" upper school and a college of further education to which other schools feed in at Banbury, and on a sixth-form college at Henley.

The weaknesses of the present position, according to the working party, are: an overlap in certain types of courses between sixth forms and colleges of further education; small and often uneconomic group sizes; the lack of choice of courses or subjects where numbers are small; and the different methods used to allocate staff and resources (based on student numbers in schools and on teaching hours in further education).

The working party argue that the "essential foundation for effective development in the tertiary stage of education is the initiation of an overall policy for the 16-19 age group, and that the l.e.a. should proceed in this as far as it can without waiting for the legislative changes which many people now believe to be necessary and long overdue."

"We have included recommendations which seem to us to be within the present competence of the authority," it says.

These recommendations are:

- Greater concentration of numbers of sixth forms, with a minimum of 150, except in remote areas.
- Cooperation between institutions through a joint approach in planning and administration throughout the county.
- The establishment of coordinating area boards.
- The appointment of an officer to be responsible for 16-19 education.

What shall we do with the 16-19s?



Oxfordshire is one of the few l.e.a.s. to make a systematic assessment of how to plan for the 16-19 age group. John Gretton reports on their conclusions

● An investigation into re-allocating staff and resources.

The report's appendices set the particular weaknesses of the current service in Oxfordshire. One of them (see chart) compares the size of teaching groups in various institutions.

Technical colleges have the smallest groups, and new sixth forms in comprehensive schools the largest. Even the established comprehensives, which have a comprehensive intake in their second year sixth, are not much better than the new ones.

Another appendix compares the teaching group size and range of subjects of the established comprehensive schools. For example, one school with 120 sixth formers has 61 groups taking 21 subjects, while another, with 129 students, has only 32 groups taking 16 subjects.

Two schools have 45 groups each, and cover roughly the same number of subjects; but one of them has 89 students, the other 108. If the sixth forms of these two schools were combined, the working party calculate, 29 teaching groups could be saved. If a third sixth form was added in from a third school as many as 46 groups could be saved.

One of the schools referred to anonymously in the hypothetical amalgamation is an Oxford City school; the other two are former county ones. Prior to local government reorganisation, the city and the county were separate education authorities, and the city went in for a three-tier system with junior,

middle and upper (13 to 18) schools.

On these grounds the working party made a formal exception of the city schools from their general principles of concentration and cooperation. They felt that it was too much to expect those who had changed school at 13 to do so again three years later.

However, as this appendix makes clear, in the medium term the city schools will have to be involved. Though population and social trends both mean that the demand for 16-plus education is going to rise sharply, it is government policy that "priority for education resources should be directed to pupils of compulsory school age, with the corollary that rationalisation and better use of existing resources should be adopted to meet the needs of 16 to 19-year-olds."

Another population trend—the move away from city centres—means that the city schools are going to get emptier, rather than fuller. Some way of combining and concentrating resources will have to be found, and a working party on the city schools is expected to report shortly.

In the case of the schools in the old county area, the working party was precluded by its brief from making specific recommendations. However, it listed the six types of institution which could result from order of concentration and conclusions. In colleges, sixth form colleges, area or "nursery" sixth forms—most would be 11 to 16 schools feeding into the "pillar" sixth form

school, federated schools (with one principal), associated sixth forms, and schools co-operating in an area program or isolated sixth forms.

The working party listed the options for each area and added comments. Two examples from Oxfordshire will show the effect of the recommendations. The first is the Kidlington/Woodstock area, with two schools: Gosford Hill at Kidlington and Marlborough at Woodstock.

At present Marlborough transfers 16-plus pupils either to further education colleges at Witney or Oxford or to Gosford Hill sixth form, which last year had 129 pupils. But Marlborough has now been given permission to start its own sixth form, and by 1979 it is expected that there will be 129 in the Gosford Hill sixth form, 61 in that at Marlborough. The two are listed as: associated sixth forms, present; or an area sixth form at Gosford Hill with Marlborough as a feeder school.

The working party point out that the numbers estimated for Marlborough are below the minimum recommended by the working party. They also feel "it is better to maintain and develop a sixth form."

In the Banbury area there are two schools, the Warriner School at Bladon, and Blessed George Napier and Drayton at Banbury. The latter has a sixth form of 233 pupils. The Roman Catholic school Blessed George Napier has an unauthorized sixth form of 41.

The present position is set out by the working party: "Apart from a small number of pupils in the Blessed George Napier (who study for some of their A levels at the Technical College) all 16-plus students are in Banbury Upper School. There is very close cooperation between Upper School and the College in a 16-plus programme of courses; together with other local schools they compose the 16 of Advanced Studies."

"There are overall guidance arrangements to advise pupils in the schools of the choices at 16 and their career implications."

The working party list four options: elated sixth forms—1, all schools with sixth forms but cooperative planning among themselves and with the technical college; area sixth form based on Banbury, present; a sixth form college, distinct from any school, in partnership with the technical college; a single tertiary college.

The associated sixth form option is the working party's preferred one, involving extra sixth form accommodation facilities—but that, it says, will be necessary by 1980 anyway.

A sixth form at the Warriner School only reach 95 by 1980—55 below the working party's minimum. The creation of a tertiary college is ruled out, for the present, by high costs. There is sufficient provision at Banbury and the technical college for 16-plus, at least until 1980.

On the sixth form in college option, the working party suggests that this could be made by living off the present upper school Banbury to create a tertiary school. If that happened, all the schools in the area would become 11 to 16 ones, but the lower part of the present Banbury sixth form would be lost. Though they do not specifically say so, it would seem to be their preferred option.



With a little help from you, your pupils could promote international respect and goodwill and earn £1,000 for your school.

Your pupils will certainly have heard of the Olympic Games and may know that the main aim of the Games is to create a climate of international respect and goodwill through sport.

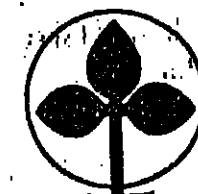
They will not have heard of Project Olympus 1976 which has been organised to coincide with this year's Olympic Games. We believe teachers will find it worthwhile to tell them.

Project Olympus has adopted the theme "International respect and goodwill", and is an opportunity for junior and secondary pupils to submit work in any form they choose which reflects this theme. It can be anything from a folder of work, a slide show, paintings, essays, or even a video tape. Anything in fact as long as it can be easily transported and is not too fragile. This project lends itself to a wide range of interpretations and need not be directly related to the Olympic Games. There is a great deal of scope for all age groups and abilities as well as for work which crosses traditional subject barriers.

Each school can submit an entry in one or more of the following age groups: 7-10 years old, 11-14 years old, 15 years and over

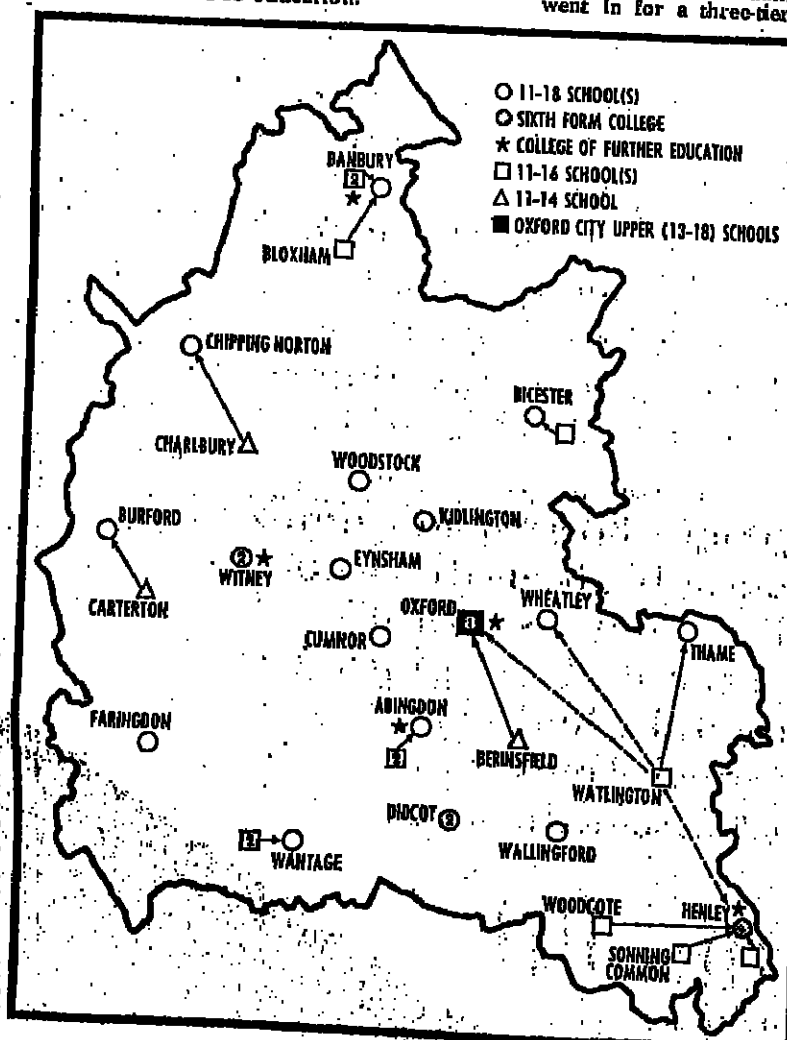
Project Olympus is open to all schools in England, Scotland and Wales. The national winner will receive a prize of £1,000, and in each of eight regions there will be three prizes—one of £200 and two of £100. The prize money can be paid into any school fund, but those winners who wish to purchase sports equipment will have the opportunity to do so at 20% off the retail price.

The sponsor of Project Olympus are Associated Biscuits Ltd. which comprises Huntley and Palmers, Jacob's and Peek Freans. Every school should receive a copy of the brochure which gives full details about the project. However, if any school requires further copies they may be obtained on request from Mr. B. Kenway, Associated Biscuits Limited, 121 King's Road, Reading Berks, RG3 1EE. International respect and goodwill... started in schools.

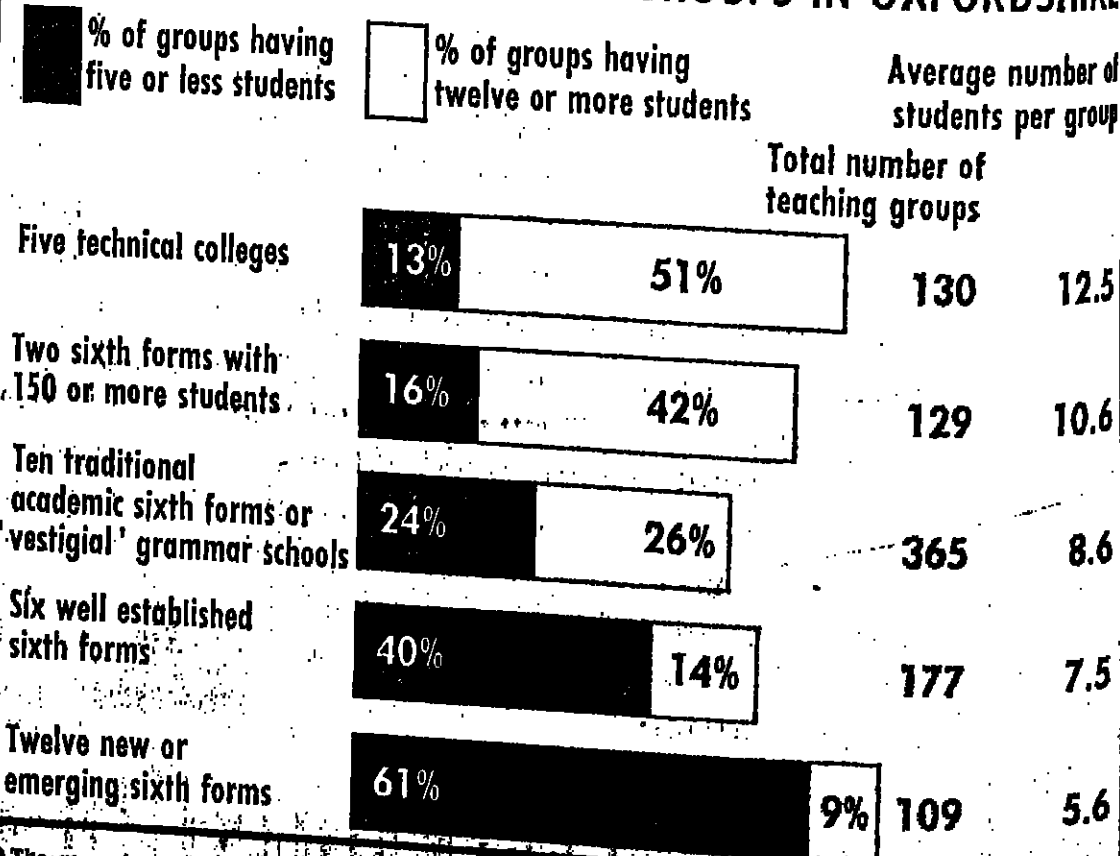


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SIZE OF SIXTH FORM TEACHING GROUPS IN OXFORDSHIRE



● The map shows the general pattern of Oxfordshire's 16-19 service at the moment. For the sake of clarity some schools which have just started their own sixth forms are shown as 11-16 schools. The bar chart (above) shows the variety of ways teachers are used in sixth forms and further education.



During last term Mr Jones has been concentrating on basic painting and pottery. Next term he intends to organize small groups for woodwork, silk screening, special types of model making, and letterpress printing. "There is great scope. I am only limited by the time I can spend on any one activity."

The centre, he says, is not a play area. It should be as important as mathematics and science.

The National Association of the Teachers of Wales set in their evidence to the committee the school's internal policy should be a matter for the head and his staff and that governing bodies should be elected and composed solely of parents and teachers in the school. They reject the idea that they have no direct personal concern for a school who are nominated because of social standing, are the best representatives, and that the head, with sole responsibility for conduct of curriculum and organization should be offset by obligatory consultation with staff. One day a term should be set aside for staff discussions on future curriculum innovations.

The most serious consequences of the present system of school management, say the association, are politically motivated appointments to teaching posts. Appointments are being made in blatant disregard of the recommendations or the needs of individual schools. This has a prejudicial effect on the education pattern within schools and lowers morale among the teaching profession generally.

They should have "general oversight" of all matters relating to conduct and to the curriculum of the school. "The governing body should be responsible for the appointment of heads and other senior staff. They must be consulted on major organizational, disciplinary and curricular matters within the school so they can suggest changes if appropriate," it says.

"Issues such as streaming, how school accommodation is used and the setting up of new departments within a school are all relevant," says the Labour Party's evidence.

It also says that problems that are so controversial that they require local authority decisions of a political nature, for example, whether

The AMA says governing bodies should never be dominated by a single political party. Parents, former pupils and representatives from local industry, higher education and voluntary bodies should have the opportunity to become governors. Governing bodies should also include at least one member of the teaching staff of a school elected by his colleagues. Pupils under 18 should not be allowed to become governors.

ROCHDALE.—St Wilfrid's RC.

C.N.A.A. is being asked to validate awards for all their courses.
Applications to: Admissions Section (E.D.), City of Birmingham Polytechnic, Corporation Street, Birmingham B4 7DX. Telephone enquiries: Westbourne Road, Edgbaston, 021-464 5100.

The course is designed for officers of Local Education Authorities and other administrative agencies connected with the educational service and for those in responsible positions in schools, colleges and other educational institutions. It will include the study of the educational system in its political, administrative and institutional settings, the assessment and use of educational management methods, and organisational analysis and use of computers. Some of the possible fields of primary, secondary and further/higher education. Each student will be required to undertake an individual study relevant to the field of administration in which he or she is working.

"Because of inflation, the amount we can spend on books and equipment is getting smaller each year. And this year, the schools themselves have been carrying an increase of 30 per cent."

The foundation cancelled the annual meeting, scrapped their site computer and cut administrative staff in attempts to keep down costs and maintain research effort.

The commission studied reports to Don't Rush Me in 104 schools, youth clubs. They found the slogan of black characters was used almost without comment.

The Don't Rush Me strip education was originally published by Wandsworth council, for white relations.

and make regular visits to the school for functions—certainly more than the termly meeting; as well as visiting the school in normal working hours".

The confederation said a governor should be limited to attending

"However, it is probably better if much of this is done by directive from the DES. Experience suggests that if it were done by statute the rules of 1976 might be hallowed and still bind us in the year 2006."

Exemple des sujets traités :

- no 25 — La crise
 - Le paysan français
- Abonnements :
- Vote normale : 24 F ; par avion : 32 F

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Language boost for regional tongues

from William Farr

PARIS The Government has approved measures proposed by M. René Haby, Minister of Education, to promote five regional languages and encourage all pupils to learn about the cultural heritage of the area in which they go to school.

The measures form part of the promised reform of the content of education; they also reflect the Government's political concern to try to satisfy home language demands in some parts of the country.

The languages concerned are Basque, Breton, Catalan, Corsican and Occitan, which is spoken in areas from Bordeaux and Toulouse to Nice and comprises 160,000 words.

French was declared to be the national language of France in 1539 in the reign of Francis I. From 1880 onwards under the Third Republic it was Government policy to suppress the so-called "stranger" dialects and even in this century schoolchildren were punished by their teachers for speaking them between themselves during play-time.

Today, large numbers of children still start primary school speaking only their regional language and continue to speak it at home while learning French at school.

The situation changed in principle in 1951 when a law was passed authorizing the teaching of local languages but little was done to provide the means for this.

Nevertheless, since 1970 it has been possible in some types of *baccalauréat* to take a regional language as an optional extra subject. In 1975, 8,500 candidates out of 240,000 exercised this right. Henceforth, candidates will be able to take a regional language in whatever type of *bac* examination—literary, scientific or technical—they are taking.

The proposed measures aim at giving substance to previous legislation by helping teachers in the regions concerned to learn the language. At primary school level local inspectors will include regional languages in their refresher courses for teachers where there is a demand. At secondary level courses will be organized for 440 voluntary teachers in regions where the languages are spoken.

On a nationwide scale M. Haby

proposes measures to promote the study of local cultural heritages. He has in mind the origin and history of local names, monuments and buildings, celebrations and traditions, music, dancing and literature as well as the natural and man-made environment and economic and social conditions.



Sheep-farmer in Bordeaux region.

M. Haby intends to set up a commission to study the cultural contents of education. It will be asked to define what children should be taught beyond knowledge and techniques of manual and intellectual work. Experts working on the revision of curricula and textbooks have been asked to pay attention to teaching all subjects in relation to local cultures and surroundings.

Production of documentation for schools on local cultures by the *Institut National de la Recherche et Documentation* and its regional centres will be increased. The Ministry of Education will double the financial contribution to the educational services of the regional offices of the *Archives de France*, which provides the basic elements for this documentation.

Spain

New minister faces rising problems all round

from William Chislett

MADRID Señor Carlos Robles Piquer, Spain's new Education Minister, has taken over at a difficult moment with increasing problems on all levels. The new minister, aged 52, who replaces Señor Ciriaco Martínez Estrella, was trained as a diplomat, working most recently in the Foreign Ministry.

Among the most pressing problems facing the new minister are lack of State nurseries, the conflict over whether some private schools should be subsidized or whether the money would be better spent on building new State schools and more independence in the running of schools.

Many teachers would like to see the 1970 Education Act reformed. They feel that general basic education (six to 14) does not demand enough of students while the new *bachillerato* (14 to 17) is too wide in scope and demands that students do in three years what they used to do in seven.

United States

Senate votes for 'almost metric'

The Senate has voted unanimously to accept metric units as America's "predominant but not exclusive" system of measurement and to convert to its general use within 10 years. The Bill now goes to the House of Representatives, which has already passed a similar measure.

The Senate Bill proposes setting up a 12-member metric board to plan and coordinate education pro-

grammes. Already metric measurements are being taught in schools in every State, but so far there is even less use of the system among the general public than in Britain. Industry has started to change over, but the Bill says this change should be voluntary. Britain, the only country not using the metric system, is a member of the United States and the metric system is a member of the metric system.

West Germany

Planning accord breaks deadlock

by David Dungworth

After more than a year of wrangling and almost six months without an independent body to advise on educational planning (TES, September 12) a compromise has been reached on new machinery to take over the functions previously performed by the German Education Council (*Deutscher Bildungsrat*).

The council was set up in 1965 under a joint agreement between the Bonn Government and the *Länder* to assess and guide the development of primary and secondary education. It was an independent organization with its own administration and complete freedom to choose which aspects of the system it would investigate and to appoint educationists and other advisers to assist its work.

During its first five-year period in office the *Bildungsrat* achieved much prestige by paving the way for some significant reforms. After 1970, however, the right-wing Christian Democrat/Christian Socialist controlled States, led by Baden-Württemberg and Bavaria, became increasingly critical of its independence—which they saw as a threat to their own autonomy in educational matters—and its preoccupation with issues of a politically controversial nature.

In particular they objected to its support for comprehensive schooling, for more pupil mobility in school government and for greater control by the Federal Government of vocational educa-

tion. They therefore refused to renew the agreement for a third term and the council's days were wound up on June 14.

When it became clear earlier this year that the council's days were numbered, a committee consisting of Herr Helmut Rohde, Federal Minister for Education and Science, Herr Gerhard Stoltenberg, Minister President of Schleswig-Holstein and Herr Huns-Ulrich Klose, Lord Mayor of Hamburg, was given the task of formulating proposals for an alternative method of securing expert advice on educational planning.

The new agreement, which was due to take effect from yesterday, was concluded at a meeting between Federal Chancellor Helmut Schmidt and the heads of the *Länder* governments at the end of last month.

It incorporates the main recommendations of the three-member committee in providing for a number of specialist commissions, which will be set up as the need arises, to examine various sectors of pre-university education. Their work will be coordinated by their chairmen and vice-chairmen who together will compose a standing committee.

Herr Rohde recently indicated some of the problems the commissions may soon have to deal with: ways of reducing the number of children who have to repeat a school year and of those who fail to obtain a secondary modern school-leaving certificate, the upgrading of the

status and standard of vocational training and methods of improving the efficiency of the education system.

As the specialist commissions will be appointed by the Federal States Commission for Educational Planning and must submit regular progress reports to it, they will be less independent than was the Education Council.

And unlike the latter they will not have their own secretariat but will share the facilities used by the Commission for Educational Planning.

Nevertheless, Bavaria has so far refused to sign the agreement, maintaining that the new apparatus will be a perpetuation of the *Bildungsrat* in a different form.

A Bavarian counter-proposal recommended that research projects on specific topics should be entrusted to teams of educationists by the Standing Conference of *Länder* Education Ministers which, it is felt, is the least likely to be influenced by central Government and the Federal States Commission for Educational Planning.

Bavaria's refusal to cooperate is a significant development. It is a major rejection of the principle of gradual movement towards educational uniformity throughout the Federal Republic.

Like the decision by the Bavarian Constitutional Court last summer that the present system of allocating university places is unconstitutional, it is a sign of the growing tendency to decentralize solutions to educational problems.

China

Learning how to 'walk on two legs'

In the new China around 90 per cent of the school-age children are now at school. The number of secondary school students in 1973 was 23 times that before liberation, and primary school enrolment increased 57 fold.

The majority of China's population lives in the countryside. Rural education is therefore of primary importance. In line with the policy of 'walking on two legs' China has two main categories of schools—one run by the government and the other by the collective with Government subsidies.

Rural communes and production brigades run schools in great numbers. They are varied in size and content, ranging from primary to secondary schools as well as an institute for nationalities in the Tibet Autonomous Region.

An important task for China's great proletarian cultural revolution is to change the old educational system, teaching principles and methods. The period of primary and secondary education is being shortened on an experimental basis from 12 to 10 years, with a more concentrated and simplified curriculum. Old teaching material is being revised.

In the Inner Mongolian Autonomous Region has eight institutions of higher education, more than 1,900 secondary schools and 16,000 primary schools, as against only one college, 22 secondary schools and 2,000 primary schools before liberation. More than 85 per cent of the population are now literate.

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Sweden

Call to 'nationalize' books

STOCKHOLM Demands by the ruling Social Democratic Party for nationalization of Sweden's schoolbooks and teaching materials have been met by a bill introduced in the Riksdag (parliament) which would bring into operation a law to nationalize schoolbooks and teaching materials.

At present 90 per cent of the industry is privately-owned and companies are registered with the National School Board. However, about 40 per cent of the market, while Liberal, the State-owned publishing company, is responsible for about 10 per cent. Several other publishing firms, including Swedish Radio and the Library Association, comprise all but 10 per cent of the remainder.



Combining theory with practice in the countryside.

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There are

Why worry over CMV?

Rare viruses, such as that responsible for Marburg virus disease (Zika) and the AIDS virus, are in the flesh of tropical medicine and a potential hazard for the rest of us. But there is growing concern about an equally unfamiliar virus which appears to be widespread in countries such as Britain, which may be responsible for a substantial proportion of congenital mental defects and which promises—perhaps threatens to be the word—to be almost as intractable.

The virus is a member of the group of herpes viruses and is called cytomegalovirus or CMV for short. Much of its sinister character derives from the fact that newly infected people suffer no obvious symptoms of infection. It simply hangs about in the bloodstream for months on end, where it is of course one of the reasons why it spreads with ease. Serious damage is done only when the people infected happen to be pregnant women, for then it seems that the virus can cross the placenta and infect the developing foetus, damaging the developing nervous system in the process.

In the United States, it has been estimated that one out of every 1,000 new born children is mentally retarded as a result. If the same is true in Britain, the virus may be responsible for 750 cases of mental retardation every year.

So why has so little been heard of CMV? Surely, one is tempted to think, such a serious cause of trouble would have forced itself on people's attention long before this. The explanation is simple enough. The lack of obvious symptoms in those who are obviously infected is part of the trouble. The prevalence of the virus has been recognized only in the past few years, with the development of techniques for telling which people in the general population have acquired antibodies to it.

Science diary by John Maddox

And these studies have shown that, by middle age, more than 80 per cent of people carry antibodies, implying that they have been infected with CMV sometime in the previous 30 or 40 years.

So what can be done? It is natural enough that virologists have thought of developing a vaccine against the virus. The ideal would be that young women should be vaccinated before pregnancy. The obvious way of doing this is with an attenuated live virus—the analogue of Sabin's oral poliomyelitis vaccine. On the face of things it seems sensible enough to attempt to control the damage done by CMV in exactly the way in which the congenital damage done by rubella (German measles) has been controlled.

Alas, there are snags, the chief of which is that the virus seems to persist indefinitely even in the tissues of people who have antibodies but no live virus in their blood, and that these viruses (most probably hidden in the lymph glands) can be reactivated during pregnancy as well as in the tissues of people given organ transplant or who suffer from cancer.

But in circumstances like these, it is plain that vaccination might be ineffectual. There is even a possibility that vaccination might contribute to the spread of infection.

Some also worry about the possibility of a inoculation with CMV virus might cause cancer—there is no evidence that the virus is implicated in the natural causation of cancer, but people are increasingly uneasy about the injection of foreign DNA into the body. So there is an urgent need for making sure these issues are cleared up.



Ovoviviparous fish are those which carry newly hatched embryos within their bodies for several days before releasing them to the dangerous outside world, and it has now been established that the surviving coelacanth (*Latimeria*) is one of these. A group of biologists at the American Museum of Natural History in New York have dissected a female coelacanth fished from the Indian Ocean some years ago and have found no

fewer than five immature fish in its reproductive tract.

The photograph (*Science*, December 12) shows one of these, with its yolk-sac still attached. This specimen is roughly a foot long, but is otherwise uncannily similar in shape to its mother (close on six feet long). So far, little is known about the embryology of *Latimeria*, but it does seem likely that it takes more than a year for the fertilized eggs to hatch.

Primary target for the ASE

by Bob Doe

Half the country's middle schools spend less than a tenth of their time on science, according to a survey carried out in Yorkshire by the Association for Science Education.

A third of the schools have no science teacher and a quarter no laboratories.

It is not surprising, then, that primary and middle school teachers at the new target for the association, who are holding their annual conference in Oxford this week. Special events have been prepared for them at the conference and new materials are being developed for middle schools. The association have committed a primary school committee to encourage contributions on primary science for their journal, *The school science review*.

But this is not an attempt to boost the association's membership, according to Mr Brian Atwood, their general secretary. They do not expect to add to the 300 or so primary school teachers in their total membership of more than 14,000, although they hope primary schools might consider corporate membership.

Instead, the new interest indicated the importance the association

attached to the contribution primary science could make to secondary work. One point made by the association's Yorkshire region was that 27 per cent of the 170 middle schools in their survey had no contact with secondary schools over the science curriculum. "Constant and close liaison between schools is vital."

Because little time was devoted to science in primary schools, "there is the likelihood that the value of science work, both in its own right and as a resource for the teaching of basic skills, is not fully exploited."

The association have been criticized in the past for a bias towards secondary schools and grammar and independent schools in particular. This was because it grew out of a public schools science masters association. They have done much to shake off this image with curriculum development projects such as the LAMP (loss academically motivated pupil) project.

A substantial part of the conference is to be devoted to mixed ability teaching in science, and the association are about to publish a booklet on the techniques involved.

In brief

Fees up

Fees for non-vocational adult education classes in Devon are to be increased from £2.50 for 10 sessions to £3 for eight sessions because of increases in teachers' salaries. Pensioners and students under 18 will continue to pay only half fees.

Glasgow belongs

Thirty-five nine and 10-year-old pupils of Durrington Middle School, Worthing, Sussex, have been invited to spend two days in Glasgow as guests of the City. Their classroom is named Glasgow.

Must re-sit 11-plus

More than 40,000 children in Northern Ireland must re-sit part of the 11-plus next year because of a slip-up in last month's examination. Children in Londonderry told their teachers that questions on their papers had been exactly the same as those in a mock 11-plus.

People

Mrs Ann Taylor, MP for Bolton West, has been appointed Parliamentary Private Secretary to Mr Fred Mulley, Education Secretary, in addition to Mr Christopher Price. She replaces Mr Bryan Davies.

Universities

Mr George Pratt, senior lecturer in music at the University of Keele has been appointed course director for the music course for 920 teenagers on board the P and O liner Uganda next autumn.

Mr Robert Cundall, reader in the department of chemistry at the University of Nottingham, to the chair of chemistry in the department of chemistry and applied chemistry, University of Salford.

Professor Istvan Mezgaros, professor of philosophy and social science at York University, Toronto, to the chair of philosophy, University of Sussex.

Schools

Mr Peter Brown, deputy head of Alderton Junior School, Bournemouth, to be head of Brunswick Park Junior School, Camberwell.

Mr J. R. G. Smith, deputy head, Myers Grove School, Sheffield, to be head, Henton Park School, Rawdon, Nt. Leeds.

Mr L. Forsyth, senior master, Myers Grove School, Sheffield, to be head, Tipton Hall School, Nr. Chesterfield.

Sport

Hockey boys on trial

This is the big build-up time of the year for schoolboy hockey with divisional trials at six centres, all aimed at producing teams for the major domestic league in the under-19 group, the divisional tournament at Aston University on January 25.

Eighty boys will play at Aston where there are two all-weather pitches, one of them floodlit, but the year has generated activity all over the place with hundreds of boys in action during the holidays, says Mr Donald Newton, secretary of the English Schoolboys Hockey Association.

The best at Aston will form the international team to compete in the home countries Green Shield sponsored championships in Edinburgh on April 6-7 and a match

against the Dutch in Amsterdam on Easter Saturday.

Senior hockey always has to keep an eye on the schoolboys, many of whom graduate into the England team. Mr Newton says that any England team usually has eight or nine who first bullied off at schools level.

Many schools have still to start their hockey and this creates a rush under-16 activities are at their height. For the first time, the juniors will have an international match of their own, also against Holland in Amsterdam on Easter Saturday.

Boys' hockey is often regarded as an activity limited to grammar and independent schools, but the picture is changing.

Canoes in the town pool

Fifteen pupils of Sparrowdale Special School, Atherton, Warrington, have been allowed to use the town's indoor swimming pool for canoe training.

North Warwickshire Council agreed to allow the children, who are mostly retarded and are on Duke of Edinburgh Award schemes, to use the £250,000 pool which was opened in June, after the school had been told it could no longer use the Pingles baths at Nuncaton near by.

Thanking the council, Mr G. Piggott, the school's headmaster, said: "The pupils have trained all summer and it is vitally necessary for them to continue this. Canoeing is an integral part of the award scheme."

Girl gymnasts' winning ways

England's leading schoolgirl gymnasts were able to eat their Christmas pudding without a qualm after a term of successful international competition which brought them away victorious over Poland and Sweden.

From among them were Rebecca Reeves (Hole Trinity Secondary School, Halifax) and Karen Robb (Owl Valley High School, Huddersfield), both also members of the British Junior team, and Karen Leighton (Lifford High School, Essex).

Although there is a return match against the Poles in the spring, the girls—and the boys—will now be devoting most of their attention to the domestic arena culminating in the All-England schools championships at the Sobell Centre, London, on March 12. Two weeks before the *Sunday Times* schools team championships in the same place.

The two competitions are complementary. The *Sunday Times* event is for those just beginning gymnastics—the tests are based on the routines of the award scheme through which hundreds of thousands of children have graduated. In the All-England championships, the competitors go through the Olympic routines of floor exercises, vaults, bars, beams, etc. This is the traditional route into the British team.

London primary schools are showing a quickening interest in competitive gymnastics, say Mr James Walsh, secretary of the Inner London competition, who is headmaster of Our Lady of Victories JMI School in West London. "About 50 schools have entered for the London competition and the final in February and the final in Lewisham on May 27."

Training grant for skier

A new Scottish ski circuit, linking three previously unconnected events, is to be jointly sponsored by Pernod, the French drink company, and Gauloise, the cigarette company. This new award will include a £200 training grant to the outstanding British skier.

The companies already sponsor the Scottish ski championships which this season are being held at Aviemore on February 28 and 29.

The Aviemore event will be a qualifying one for the new circuit points competition, along with the Best of Scotland championships at Glenagee on February 7 and 8 and the West of Scotland championships at Glenelg on March 20 and 21. Both the ski and giant slalom races will count since the competition is designed to favour the all-round skier rather than the specialist.

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The grand delusion

Rosalind Driver argues that the spirit of open inquiry needed in science work is being sacrificed to school success

Many secondary science courses suggest that as science teachers we are suffering from a grand delusion. The delusion is that science teaching can be genuinely "open-ended", "inquiry oriented" and can yet enable students to learn an accepted body of knowledge. Most of us who have these aims know we play a confidence trick on our students, and use terms such as "guided discovery" to describe the process we use. Our students respond in the same spirit, following their investigations with such questions as "Is this what ought to happen?"

"Have we got the right answer?"

With the coming of Nuffield Science we seemed to have found the compromise between science as useful knowledge and as a way of finding out. Here were schemes in which children acquired useful knowledge through their own investigations. But even here teaching science as a body of knowledge and science as a process of honest inquiry may be incompatible aims.

The difficulty lies in the different perspectives of teachers and learners. These perspectives not only affect the interpretations that can be suggested for observations,

but also the observations themselves, which are viewed through a person's expectations and previous experiences.

Teachers know what aspects of a system they want to pay attention to, and why. They usually know what outcome to expect, and are prepared to "see" them, consciously or unconsciously adjusting the apparatus or situation in order that they occur. But students may be ignorant of this framework, and have little basis on which to select the observations in a new situation.

Students enter our laboratory to view mysterious collections of objects which we as teachers expect them to observe and interpret. They have little knowledge to sustain their explanations, and even their way of observing events will be different from ours. How can a naive observer distinguish "significant" observations from what is incidental, when the significance comes from the theoretical interpretation we are going to impose on events?

What we as trained observers "see" as obvious is far from obvious to an untrained eye. What is clearly an indication of changes of current in a circuit to a physicist may be

perceived and remembered as little more than ebon-headed pins, a mysteriously moving light and a mass of wires. Try introducing students to the observation of wave patterns in a ripple tank, onion skin cells through a microscope, or patterns of iron filings around magnets, and ask them to draw what they see without any guidance.

Of course we rarely allow students to approach a new situation without some direction. Because of our concern to reach a body of knowledge, we shape students' ideas by the careful sequence of activities, the equipment available, and by questioning observations in a new situation. Like scientists, they have little knowledge to sustain their explanations, and even their way of observing events will be different from ours. How can a naive observer distinguish "significant" observations from what is incidental, when the significance comes from the theoretical interpretation we are going to impose on events?

Science teachers may recognize a situation which commonly arises, when students are using a circuit to see if electric current is used up in a simple circuit by measuring the current on either side of a lamp. Many students expect the current leaving "Of course current is smaller than that entering the lamp to be the light come from?"

Because of the shortcomings of equipment used, the second ammeter may register a lower value than the first and this is the other recorded without question. If on the other hand, the readings are the same, the result is questioned and students are prompted to repeat the measurements. If left to observe and interpret without teacher guidance, students may not understand phenomena in terms of our "accepted" theories, but assume observations into their own frameworks.

Students also come to certain topics in science with intuitions already developed on the basis of their everyday experiences. Some of these ideas are particularly well formed, and may be held on to stubbornly despite conflicting data. This is particularly true of ideas involving kinesthetic information, notions concerning dynamics or heat.

The following comments were made by a 12-year-old, Tim, over several months, and show an underlying idea he has about weight and gravity. When he is about to pull a cart up an incline, using a spring balance in order to measure the force exerted, he predicts it will be harder to pull the higher up it goes. Another time he has equal weights suspended on the ends of a string over a pair of pulleys, so that the weights hang at the same height. He moves the weights round on how he thought the two would return to the same level "like a balance."

For Tim, as for many students of his age, the "weight" of an object is connected with its height from the ground. Tim explained, "The higher it gets the more force gravity is going to have on it, because if you just stand over here and someone dropped a stone on him it wouldn't hurt him. But if I dropped it from an airplane and when it was accelerating faster and faster and when it was falling it would kill him."

With such emphatic ideas of the structure of the discipline and unifying themes, we expose students to "powerful" theories which aim to help them integrate a wider variety of experiences, forgetting that they come with their own theories already formulated.

Students' theories about heat is a case in point. Their experiences, and common-sense myths such as "heat rises" have led them to consider heat as a "stuff". In science courses, on the other hand, they are introduced to the "Newtonian" theory of heat, the kinetic molecular theory. The students are asked to reconcile their own ideas and the theory, and to pick up in class about such a theory is illustrated in some answers to a homework question.

A group of 13-year-olds of average ability had followed the Nuffield Combined Science Unit on "particles". They were then asked to explain the expansion of mercury in a thermometer when the bulb is heated. Their responses show the varied success they have in relating the new ideas about particles to their original thinking. In some cases the particle ideas are adopted, but it does not mask the more primitive ideas behind the explanation.

"Mercury rises up a thermometer when it is heated because it gets hot and the particles move away from the heat and up the thermometer."

"Mercury likes to be cool so when it is heated the particles are trying to get away from the heat so they move up as it is the only place it can go."

In other cases a more thorough attempt is being made to use the notion of particles to explain expansion, yet their existence still appears to be seen as independent of the mercury.

"Heat is making the particles expand, they now need more space to move and so push upwards making the mercury rise as well."

Given such responses, what do teachers do? Do we see them as "right" or "wrong" answers or as attempts by the students to bring their experience and understanding as far as they can into agreement with "school knowledge"?

What hope have we of helping students' ideas to undergo what are, to them, as radical changes? Certainly patience is called for; a student needs time to think out the implications of new ideas, not simply for the situation at hand, but the many others that the ideas apply to. What teacher has not been faced with the comment "Yes, I see you are right, but why am I wrong?"

Perhaps we are rather optimistic, or arrogant, to expect students to abandon in a mere span of an hour or so in a science class ideas which they may have developed through years of experience. The question is not that of helping students to make up their minds, but how to unmake them. Our students are not unique in their stubbornness. Max Planck came to a similar conclusion about scientists when he said: "New theories do not convert people; it is just that old men die." Students are much more flexible in their thinking, and we can help them to remain so.

What we have seen in the comments and activities of students are glimpses of the genuine attempts at inquiry, of making the world make sense to them, and how this does not necessarily "lead them" to the accepted view. On the other hand they are growing in their awareness that they are growing, and that what they have to discover is how their experiences and ideas can be reconciled with it. If they have difficulty doing this, such guided discovery can cause them to doubt their own observations and judge that did not happen in our experiment."

What did struggle honestly to understand situations and failing to "see" things the way the teacher does, the student soon realises that as in most of their experiences in school there is a right answer. Instead of a genuine involvement in a process of inquiry, they find out what is supposed to happen, reject any real involvement in the topic under study in favour of playing the game of getting the "right answer". Less attention is paid to practical situations than the words or phrases to be used in the worksheet. The intellectual curiosity and integrity of the student has been sacrificed to school success."

Rosalind Driver teaches at the Centre for Studies in Science Education at Leeds University. This is a shortened version of her article printed in *The School Science Review*, June, 1975.

COURSES

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Corps on the curriculum

Should the
Ministry of Defence
still be
spending over £2 million
on combined
cadet forces?
Are CCFs
merely a
leftover from the Raj,
or a valuable
training ground for
leadership?
Tim Albert reports



For about two hours a week Lawrence Halstead, schoolmaster, becomes Squadron Leader. He is only 32, lives at home with his parents, and teaches classics and produces television programmes at William Ellis School, North London. He is also in charge of the 70 boys and two teacher-officers in the school's combined cadet force. "We're not still fighting the last war," he says. "Our main emphasis now is on self-reliance exercises."

As a schoolboy at St Benedict's, Ealing, he enjoyed fiddling around with signals equipment. When he came to teach at William Ellis in 1966, he was roped into the CCF. Now his brother officers have moved on and he is in charge. He has been on a week's training course ("mainly admin") and still goes on occasional conferences. He has a uniform, paid for out of a £110 uniform allowance, which he only wears on official business. He gets

the daily rate for a squadron leader, up to a maximum of 28 days, which works out at about £400 a year.

"I suppose it sounds terribly old-fashioned to talk about comradeship, but it's true," he says. "Comradeship with other officers, with the boys and with people from other schools." The contingent he commands have their headquarters in two huts by the school playground, as do some of their contents—forms, tents and an old Land Rover. There are no rifles; the contingent have about 30 and target practice, but these are kept for security reasons in the Tower of London.

The 70 members meet once a week for about two hours. After a short parade they split up into small groups for activities which lead up to various certificates. These may

include topics such as map reading, survival under arduous conditions, and the principles of flight.

The boys may also go on up to five week-end camps a year, have 10 days' adventure training in Wales or on Dartmoor, and week-long camps at an army base or an RAF station. As a whole, the contingent receive a grant of about £400 from the Ministry of Defence, which "just about pays the electricity bill."

"I think it makes a good contribution to the life of boys in the school," says the headmaster, Mr Russell Perry. "It teaches them things like leadership and responsibility and self-dependence. It also allows boys to experience service life and develop career interests. If it came out of the education budget then perhaps I would say it should be spent in other ways. But it doesn't."

In fact the William Ellis CCF, like the

other 266 contingents in the country, are under the control of the Ministry of Defence. Policy decisions are made by the admirals, major-general and air vice-marshal. They are put into effect by the Joint Cadet Executive, who meet once a month and consist of a colonel, a navy commander and a retired air commodore. The contingent has its own parent establishment and each of the three services maintain teams of about 100 junior officers as senior NCOs as training teams.

The Ministry are careful to point out to each school to decide whether they have a CCF and, if they do, how to fit it into their timetable. Teacher-officers are appointed by the head.

"We are still biased towards the more select



staff officer to the Colonel (Cadets) and secretary of the Joint Cadet Executive. "We are quite properly detached from the schools themselves, and allow the proper function of schooling to go on as the schools wish."

Yet the Ministry's control, if unobtrusive, is firm. They can refuse an application to set up a CCF (usually on the grounds that the school, or its sixth form, is too small). They keep informal contact with each school contingent through their cadet teams, and draw them in for a formal inspection, after which support can be withdrawn. They can also withdraw commissions, either on security grounds, or if he turns out to be an "unsuitable character". "He is wearing our uniform," says Major Tennant. "If he is in a position where he may bring discredit on it then it's better that he doesn't wear it at all."

Throughout the country there are a total

of 40,500 cadets and 1,634 officers, in contingents varying in size from William Ellis's 70 cadets and three officers, to Oundle, with 17 officers and 485 cadets. But generally numbers are going down: in 1968 there were 4,000 more cadets and about 200 more officers.

"There has been a slightly anti-militaristic feeling throughout education," says Major Tennant. "We would suggest that this is no longer the case, and that this year there has been an increase in interest."

The CCF were founded in 1948, though some kind of officer training has existed in certain selected schools since 1862. "Apart from the public relations value, they are still a great source of officer recruitment: for example between 54 and 60 per cent of young men entering the Royal Military Academy, Sandhurst, have come through a school CCF. They are still biased towards the more select

ive schools: 124 contingents are in independent schools, 50 in direct grant schools and 87 in local authority schools.

Yet these schools get between them an estimated £2m to £2.5m a year. The money from the Ministry of Defence goes on officers' pay, equipment, buildings and grants. These consist of £59 establishment grant and £4.00 for every cadet up to 40, and another £3.00 for each subsequent cadet. The army also pay £1.50 for every army cadet.

Air Commodore (retired) Peter Seymour, the RAF representative on the Joint Cadet Executive, is convinced that it is worthwhile. "We provide a different field of training, education and experience in which a boy has another avenue up which he can go and shine. We provide a disciplined organization which benefits the school, provided it is run properly. It can bring out character and leadership potential which is terribly difficult to

direct out of a young boy."

Others are not so sure. Mr Robert Kilroy-Silk, Labour MP for Ormskirk, who has already raised the matter in the House of Commons, says that the CCF is effectively being used to subsidize rock climbing and mountaineering.

"I object because it is going to the wrong kind of school," he says. "And I don't believe in inculcating the military ethic anyway. The whole approach is based on an assumption of empire and that which doesn't encourage leadership qualities which don't require £2m of taxpayers' money."

Major Tennant is undaunted and says abolition of the CCF would be an absolute tragedy. "Service to one's country is a slightly well-worn phrase," he says, "but it is a useful one. But we hope it still means something."

Mental maps

Jeff Bishop examines
some recent ideas on children's perception
of their environment

You're right from your side
Me, I'm right from mine.
Because education has always been characterized as an encounter with right firmly on the side of the teacher, we can assume that Bob Dylan, the author of the lines above, did not appreciate his time at school. Recent shifts in educational techniques, from the adult-oriented teaching towards a child-oriented learning.

But the knowledge, opinions and values continue to flow in one direction. One of the shifts has brought about a new field (or is it form?) of study based on the child's physical environment. Environmental studies

remains all things to all people, but after 18 months of school-based research I think that the key to the study of the environment lies in the fact that it requires a participative teaching not learning, and which should consider and evolve from the child's perception of the world.

Environmental education is rooted firmly in the area of perception, and particularly in children's developing awareness and understanding of the world of which they are a part. The environment as a subject is unique in having no commonly agreed on objective ways by which it can be described or analysed.

Even the simplest description of a single room, which to us in the west is clear, may be meaningless to someone from another culture. We have all experienced the familiar journey which can apparently endure a lifetime on one day, but pass in a moment on undertaking it. No second of our interaction with the environment is free of such constraints; and yet there are currently teachers in Britain who are teaching environmental "facts".

We all perceive our world in different ways, but with certain culturally common frameworks and elements. This perception has developed meaningfully for each of us

in our lives—each of us is "right". The same applies to children who, even at infant school age, have developed relatively coherent and consistent pictures of their world, which teachers ignore at their peril: to sit the inevitable linguistic analogy, it is useless talking only French to somebody who speaks German.

As an architect, less polemic and more prepared argument is necessary for me on the subject of the child's perception of the world. My introduction to the subject was through Lynch and Piaget, through developmental psychology and cognitive mapping (the theory that we build up in our minds representations of external situations which

are not comprehensive, but diagrammatic and symbolic, map-like). Piaget has done little directly on the environment, but three of his stages of development are relevant to environmental perception. From about five to nine years is the pre-operational stage, the period of topological space when the child appreciates simple relationships between a number of objects, and structures them around concepts such as proximity, enclosure and repetition. Imagined reversal of sequences is not possible, and the child cannot yet hypothesize new sequences and connections.

The second stage, between the ages of nine and 13, is the concrete operational, the period of projective space when relationships between a whole series of familiar objects are understood. The child does not yet relate one set of relationships to another which may overlap. It knows correctly a number of sequences (routes), and can usually reverse them and represent them clearly on a map with a good level of scale and directional accuracy. Each sequence is treated as a separate entity, and the child cannot yet overlap them successfully into any form of matrix.

The matrix emerges during the final stage (we presume it is final, but Piaget does not say so), known as the formal operational stage. Euclidean space—O level geometry with hypotheses, deductions and fairly complex relationships—now becomes dominant and we find what are normally considered mature abilities. Thus the child (now young person) can abstract and hypothesize and knows the overall pattern of certain places.

A map drawn at this stage characteristically starts with a few overall guidelines and symbolic, map-like). Piaget has done little directly on the environment, but three of his stages of development are relevant to environmental perception. From about five to nine years is the pre-operational stage, the period of topological space when the child appreciates simple relationships between a number of objects, and structures them around concepts such as proximity, enclosure and repetition. Imagined reversal of sequences is not possible, and the child cannot yet hypothesize new sequences and connections.

Lynch used a small, highly selective, articulate, middle-class group of respondents, and his work is more seminal than comprehensive, but the cognitive map notion has been extended in several directions. I have been studying techniques with children from nine to 16 years, and my results were somewhat surprising. Lynch's elements sometimes emerged, but in rather altered form. For example, a major landmark in Harwich is town, but this did not appear on any map. What did appear was the public lavatory at the foot of the lighthouse, used by children as they waited for the bus.

Although Piaget and Lynch provide a foundation, the shape of the superstructure appears to be changing, and we may see the need to reconsider the details. The seeds of doubt blow in from several directions. G

Moore put forward an extreme interactionist theory which almost denies the distinction of stages to ages by suggesting that familiarity is the major determinant of cognitive maps. He points out that children's maps are not mature, but that they are a developmental stage of an individual's map-making process. He suggests that we should give the young child more opportunity to lead us rather than be passively pushed along or dragged by an adult hand.

D. Stea has used environmental modelling techniques with young children, and concludes that modelling abilities are established by the age of three; his work on aerial photographs, concludes that the child can read these successfully by the age of nine "at the latest".

Some of my work on the neighbourhood around Chelsea Football Club, suggests that the motivation is a further important factor in the development and ultimate content of environmental perceptions. My work separated responses from residents of the area, non-residents, supporters and non-supporters. There were clear differences according to the respondent's reason for knowing the area. This helps to explain a further important factor in the development of the child's map-making system, and the supposed benefits of Euclidean systems might be a positive disadvantage to his cognitive map. That much research has ignored the content of children's maps in favour of their style, because we would dis-

cover not only that children perceive in different ways to adults, but also the things which they choose as significant would be very different to those chosen by adults. We are left with the notion that children develop their environmental understanding through a series of stages, which are probably less related to age than to experience of environments.

The inescapability of a child's relationship to the physical environment makes it unsurprising that stages can be reached earlier than general theory might suggest, and the uniqueness of each child's early experience also makes it unsurprising that common structures only appear relatively late. The environment outside school precludes the clean slate approach of much teaching, and the teacher must consider the involvement of children with their environment. This involvement is largely, however, age related: thus a landmark for an eight-year-old is the sweet shop, but for a 14-year-old it is the record shop.

"Children need to develop interest in their environment because it will ultimately be responsible for its control. Perception is important because design (in the broadest sense) is about the delicate balance of competing priorities. The growing self-awareness which perception studies demands can be seen as a first step for those who will ultimately be responsible for the balancing, and for the many who must contribute to it."

Jeff Bishop teaches at the School for Advanced Urban Studies, Bristol University.

Transatlantic celebrations

Michael Binyon, our correspondent in Washington, reports on how the Bicentennial is being marked in the schools of the United States

How should America celebrate its 200th birthday? A school teacher in Tennessee recently asked her sixteen-year-old pupils:

"I think we should have a great big dinner. All kinds of people could come. We'd have a great big old steak and we'd have salad and taters. The President Ford could ask the blessing. He'd thank God for America. Henry Kissinger could be there and me and my brother and my mama could come. I don't know about my daddy—he's in Florida."

That was Kevin's reply. Andrew said: "I think we should invite everyone here and tell them how sorry we are. Sorry about the wars—for being in them. I remember the Civil War. President Lincoln didn't think that coloured people should be slaves. I didn't think so, either, so President Lincoln and the coloured people had a war. We won. President Lincoln got killed in the war. The man's name was John something. I think Lincoln was riding a horse when he got shot. I wish he could be here for America's 200th birthday. I really do."

Steve was more practical: "They ought to try to clean it up. I don't like to see trash. There's a lot of garbage. I'm going to clean up my house too. There might be

some garbage under the couch and I'm going to throw it away."

Julie had the most historical approach: "I think we should remember Mr. Columbus. He sailed across the ocean. He came over here because a long time ago there were those people and this king. They wouldn't let Mr. Columbus go to the church he wanted to. And the preachers didn't tell the truth. And so some people decided to come over to America. They stayed right by the ocean at first. And they thought it would be a good land for them and so they went back and tried to get more people to come back over. Those people who were still over in the king's land, they made those over on American pay lots of money. The people of America didn't want to pay taxes. So they started a war. And America won."

Perhaps the most appealing answer came from Melissa: "The President should make a cake for us. My daddy knows how to cook, so the President should let him. We could all go to Washington too. We could stay at the White House and sleep with the President, if he's there. He stays there all the time, except sometimes at night he goes out. That's when he goes home."

All over America these sugges-

tions have already been taken up. Schools are remembering Christopher Columbus, Abraham Lincoln and the colonial war. Children are making collages, murals, writing eye-witness accounts of battles, pretending they are English soldiers fighting in a foreign land, finding out why the immigrants came over and where their own ancestors came from. Teachers are using the historic battles to promote ideas of peace.

And everywhere children are dressing up as settlers and eating colonial meals, maybe not steaks, but oatmeal cakes, home-cooked preserves, milk, eggs, hot rolls and grits. Next year, maybe some will go to the White House and see—though not sleep with—the President.

The Bicentennial is the biggest fllip to American history teaching for years. Not only schools, but everyone in the United States is doing their bit: every evening on television a famous personality spends a minute describing what happened 200 years ago that day—there are Bicentennial posters, Bicentennial films and exhibitions, Bicentennial offices in shops and programmes. At a national level, the year's celebrations are coordinated by the American Revolution

Bicentennial Administration. In schools many of the ideas have been suggested by the National Education Association, America's largest teachers' union.

The Reader's Digest Foundation are sponsoring an essay competition to show the relevance of past history to future peace. Subjects include "The interdependence of all peoples" and "The principles of the American Revolution as guidelines for human relationships". The NEA are running art, craft, photographic and sculpture competitions, organizing cultural and ethnic celebrations, establishing a Peace Trophy and using satellite demonstrations to show teachers how to use technology in educating a global community.

In schools, all kinds of projects are recommended: choral readings of selected great speeches; press conferences interviewing Jefferson, Washington and other historic figures; re-enacting the debate on the American constitution; singing songs from the revolutionary wars; planning past presidential campaigns; constructing model colonial homes and researching local history and monuments.

Above all, children are being urged to take pride in their ethnic heritage. "All Americans are immigrants—even the ancestors of

the Indian first crossed the St. Lawrence," a pamphlet published by the NEA says. It goes on to say: "What are the contributions of minorities—Jews, Blacks, Catholics, Mexicans, etc." "What are the groups in your local area?" "Explore some of the contributions to the community in which you live." The year is a crusading one at a time increased racial conflict is

Everything will come to a head on July 4, when schools will vibrate the steak and cakes the usance children are so looking forward to. And by the middle next year the country will be in the middle of an extraordinary season of films, concerts, and ethnic exhibitions. Every school will have its own local history museum; the street decorations will recall the struggle for independence; the founding fathers will honour the founders of the country. For the British there will be memories: the old enemy will be welcomed back and much will be made of the two countries' common heritage. The British, too, are re-examining the Bicentennial. For the most touching message is: "Come Home, America. It is forgiven."

For this reason it is hoped that the emphasis of the syllabus will be on America today, and we hope that teachers will deal with topical events, such as the financial difficulties of New York, within a syllabus which is designed to accommodate matters of current interest. Some background knowledge of the past is, of course, necessary to understand what is happening today.

The position of black Americans and minority groups within the United States must be seen in relation to their past experience; the President's relations with Congress are affected not only by recent events like Watergate but are rooted in the American constitution. Nevertheless, the syllabus comes right up to the present day and assimilates relevant historical events to the present, rather than treating 1776 as an afterthought.

The syllabus is pitched at O (alternative) level, because the working-party which prepared it thought that a background of history, economics, geography, sociology or literature would be a well-rounded education for the sixth form. The syllabus is pitched at O level, and to sixth forms A and B levels.

A staple textbook for the pre-level student is still C. P. Hill's *History of the USA* (published by Arnold) and for the sixth form *Christie's History* (Macmillan) with its good bibliographies. For general studies see a wide range of books used to illustrate different aspects of the United States, together with slides, film tapes and records.

BBC TV and ITV and radio provide invaluable assistance on occasions and will be of great help to the bicentennial year. Authors are in the process of producing general studies books to include: *Introductions*, *Steinbeck*, *Clayton*, *Hargreaves*, *Ralston*, *Cleaver*, *Milford*, *Gore*, *Wick*, *Updike*, *Roth*, *Wells*, *Muller*, *Capote*, *Alsup*, *Heller*, and *O'Neill*.

There is clearly no danger of Americans monopolising the curriculum in our schools. We can already see some stimulating opportunities in comparative studies in the development of American studies. The claim to attention requested by European and world themes is strong, though a form of reconciliation is provided by the School of Oriental and African Studies' excellent syllabus for world study and their accompanying books.

American studies in our schools touch on issues of the greatest concern like democracy in political theory and practice, war and peace, race relations, the situation and feelings of the adolescent. They are linked with mass culture in film, television, entertainment and humour. They can be thoroughly enjoyed and profitably studied with no loss of academic standards at all. They are a necessary part of the first schooling. Let us hope that the bicentennial year will see another step forward in the exploration and expansion of American themes.

O level syllabus for 1977

By H. G. Earnshaw, senior assistant secretary, the Associated Examining Board

The Associated Examining Board plan to introduce a syllabus in American studies at O (alternative) level with the first examination in June, 1977.

The first question to ask about a new syllabus is "Why?" The answer is that what happens in America affects us, while we have some influence in the United States. If Chrysler run into difficulties they curtail their operations in Britain; our television programmes show many American imports; plays and productions from this country are presented on Broadway; America is an important market for our exports in woollens, whisky and china, among other goods. We have many links in commitments in defence and consult about foreign policy. A grasp of American affairs is essential for a full understanding of events and developments in our own country.

For this reason it is hoped that the emphasis of the syllabus will be on America today, and we hope that teachers will deal with topical events, such as the financial difficulties of New York, within a syllabus which is designed to accommodate matters of current interest. Some background knowledge of the past is, of course, necessary to understand what is happening today.

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A number of specialists in different regions will be appointed to inform and advise teachers. In partic-



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ular, they will be able to give advice about the special topic for study that each school can choose for itself. This will be assessed within the school by whatever means are most appropriate to the content, subject to moderation by the regional advisers.

Where schools would find a link with an American school or college helpful in locating and providing teaching material the board are planning to provide these links. For instance, if a school in Dagenham wishes to study Ford's as an example of a multi-national company, we shall find a school in Detroit to pair with it. A college in Liverpool wishing to study the education system in a large American city might be paired with a community college in Boston, while a school in East Anglia might find a link with Kansas helpful in a study of some aspects of farming. There is already evidence of considerable interest in American schools in such a scheme. This pairing is not compulsory. A teacher who wishes to study some aspects of American literature may prefer to depend on material already available in this country. However, many schools regard the links as attractive and useful.

Part of the grant has been set aside to provide some help for schools in obtaining books and other teaching materials during the initial phase of the examination. This sum will be divided out according to the number of entries received during the first two years of the examination in 1977 and 1978. After that time the syllabus will have established itself as a worthwhile addition to the curriculum and that it will maintain itself.

The approach to the syllabus is interdisciplinary. The working party thought that separate components of history, literature and geography were less desirable than a treatment which showed the interaction of geography and economics, history and politics, sociology and culture. In the section on the American life, they had been included as an option, but it is hoped that students will read novels and biographies, see films, plays, television programmes, listen to the radio and read newspapers and periodicals such as *Time* and *Newsweek*. These would not only increase their knowledge and extend their understanding but would encourage them to evaluate what they read, saw and heard against a background of American life.

Preliminary response shown at regional meetings of teachers has been as lively as we had hoped, with helpful comments about the syllabus and specimen examination papers; more schools have answered the questionnaires than anticipated and the response was greater than to the syllabus in European studies which the board recently introduced. Anyone requiring further information should write to me at the board's offices.

A natural area of growth

Aspects of training college work. By Lloyd Hughes, lecturer in history, department of American studies, Bishop Grosseteste College, Lincoln.

Anyone interested in American studies at colleges of education in England and Wales could be forgiven for believing that there is a regional bias. Of the seven colleges offering the subject not one is to be found in Southern England or in Wales. The colleges are: Bingley, Coventry, Derby (Bishop Lonsdale); Didsbury; Lincoln (Bishop Grosseteste); Liverpool (St. Katherine's); and Sunderland.

The growth of courses like American studies can be seen in the general move to develop integrated, interdisciplinary, and combined approaches to learning. Study of the United States by British students was a natural area of growth. It did not require expertise in a foreign language. It was a vital element in international politics, its literature contained works of major importance, it provided some of the best examples and most advanced models for both geographers and sociologists, and the influence of its mass culture was almost world-wide. American studies gave prospective primary school teachers experience in a variety of skills and techniques as well as serving the desirable function of a main course—i.e. "education" for the student. Many schools were urging their staffs to cross subject boundaries, American studies afforded and continues to afford, the opportunity for students to do so, even at degree level.

Although called American studies all seven colleges concentrate on the United States. Similarly the curricula of all contain the common elements of history and literature. Geography, politics, sociology, art, music, education and science serve as additional elements in some colleges. Their roles vary from equality with history and literature to the relative unimportance of background or illustration. The existence of these component parts of an American studies course reflects the essential dilemma of those involved in teaching in an area that is loosely defined, if at all. There is no specific discipline of American studies. It must of necessity be a combination or coalescence of generally recognized disciplines around a central theme of America. The starting point for both staff and students must be an interest in the United States.

Details of structure and curriculum of American studies courses at colleges can be illustrated by example. The department at Lincoln (Bishop Grosseteste) consists of specialists in geography, history and literature with minor contributions being made in education and politics. There are two courses to be followed for certificate. The foundation element of the first course is concerned with the students acquiring and developing the skills and techniques of the three major and equal disciplines. This course then proceeds under the title of "Crisis and a People of Plenty", during which certain key issues are examined and literary texts studied. The Civil War, the location of industry, the works of Twain and Whitman, and the New Deal are examples of the studies made during the course. The second course is equally divided between the topics of urbanization and the rural response, and America—home and abroad. Under these heads tutors sometimes combine to explore themes like the immigrant and the city, or the black experience since the Civil War. Not only is there scope for combination but also for discrete studies like the forms and functions of the city, American foreign policy, and the works of selected realist authors. The four-year "old style" BEd course consists of the certificate plus a choice of two topics from a list of several, including the frontier and a selected twentieth-century period.

Like all colleges, Lincoln is in the process of change and new degrees and courses are being developed. American studies may be taken as a subject for teachers' certificate, "old style" BEd, three-year "new" BEd, four-year "new" honours BEd, and possibly as elements in a DipHE and B Combined Studies.

The changes that are taking place in colleges are likely to result in a greater opportunity for students to take American studies. As yet there are few specific qualifications needed for those wishing to take these courses other than the general requirements of the individual colleges. The main qualities sought are a keen interest in the United States and a desire to cross disciplinary boundaries in search of knowledge and understanding.

The rapidity of change within colleges make definitive statements on the bulk of the curriculum, the qualifications obtainable, and the content and even the location of courses, difficult. Most colleges have certain common elements in their courses. The frontier or the west is fairly general, presumably on the basis of its attractiveness to both student and pupil. Minorities and the twentieth-century experience of the United States are also popular. Some colleges allow students to specialize in a particular discipline during part of their course, others attempt a fully integrated approach to the study of selected American topics or patches. Those departments with the regular services of a geographer study the city in the United States, some other departments use their geographer to paint a backdrop against which history and literature are illuminated.

There is no set organization of American studies in colleges. In some, like St. Katherine's, there is a department with permanent staff, while in other colleges, like Bishop Lonsdale, there is no set department but a group of tutors from other departments who make periodic contributions, of varying size, to the American studies course. There are benefits and drawbacks to both systems. The non-department structure can offer more variety in course content but can make long-term planning more difficult because of conflicting demands upon contributing tutors. The full department probably means a more coherent approach to the course are limited to the particular expertise of the full-time members, but within those restrictions flexibility of time tabling is greater and planning much easier.

Five of the colleges have exchange programmes for their students. Coventry with Eastern Michigan University, Derby with Keene College of New Hampshire, Didsbury with State University of Buffalo, Lincoln with New York State College of New Jersey, and St. Katherine's with Wittenberg University, Ohio. Tutors at Bingley and Sunderland are exploring the possibilities and are anticipating that they will be able to offer this facility to their American studies students.

Details of structure and curriculum of American studies courses at col-

leges can be illustrated by example. The department at Lincoln (Bishop Grosseteste) consists of specialists in geography, history and literature with minor contributions being made in education and politics. There are two courses to be followed for certificate. The foundation element of the first course is concerned with the students acquiring and developing the skills and techniques of the three major and equal disciplines. This course then proceeds under the title of "Crisis and a People of Plenty", during which certain key issues are examined and literary texts studied. The Civil War, the location of industry, the works of Twain and Whitman, and the New Deal are examples of the studies made during the course. The second course is equally divided between the topics of urbanization and the rural response, and America—home and abroad. Under these heads tutors sometimes combine to explore themes like the immigrant and the city, or the black experience since the Civil War. Not only is there scope for combination but also for discrete studies like the forms and functions of the city, American foreign policy, and the works of selected realist authors. The four-year "old style" BEd course consists of the certificate plus a choice of two topics from a list of several, including the frontier and a selected twentieth-century period.

Like all colleges, Lincoln is in the process of change and new degrees and courses are being developed. American studies may be taken as a subject for teachers' certificate, "old style" BEd, three-year "new" BEd, four-year "new" honours BEd, and possibly as elements in a DipHE and B Combined Studies.

The changes that are taking place in colleges are likely to result in a greater opportunity for students to take American studies. As yet there are few specific qualifications needed for those wishing to take these courses other than the general requirements of the individual colleges. The main qualities sought are a keen interest in the United States and a desire to cross disciplinary boundaries in search of knowledge and understanding.

Maps and guide-lines for the new explorers

J. R. Avery, headmaster, Bristol Grammar School, charts the accelerating progress of American studies in Britain

"There was very little in my excellent grammar school education to rip apart a tough patchwork of preconceptions, for in British schools in my day American history stopped abruptly with the outbreak of the Revolutionary War on the principle that if they did not need us, we did not need them."

Alastair Cook has played a leading and popular role in throwing out much of the prejudice-crammed message which the Englishman carried on his exploration, real or imaginary, of the United States. Many others have done their share in ripping up the fabric of mistaken assumptions, so that in American studies, as in Green Pastures, "things rolled down are fast coming loose."

Much credit should go to the British Association for American Studies, the universities, polytechnics, colleges of education, United States Information Service, the BBC, museums and many other agencies all aiding at equipping and encouraging the teacher in the classroom.

A picture of the extent and nature of American studies or subjects in our schools and colleges was drawn by J. M. Porter, reader at the London School of Economics, in 1963. His survey revealing how much ground was to be won was followed by a Gallup poll survey in 1968. This year the BAAS will be conducting another fact finding inquiry.

Clearly some considerable progress has been made in the last 10 years. The BAAS special courses for teachers in schools and colleges of education held at the Universities of Sussex and Durham reflected the encouraging expansion of American subjects particularly at teacher-training level. The next special course will be held at the University of Birmingham, April 4-7, organized by Dr Richard Simmons, of the history department, offering a wide range of seminars on political, economic, historical, geographical, literary, musical and other subjects. There will also be a session on teaching aids and simulation games taken by Rex Walford.

Teachers who come to these courses have to work hard, prepare written contributions and certainly do their homework, in return for which they enjoy meeting colleagues of similar interests and being taught by university academics to non-members of BAAS and applications are welcomed. No one any level can afford to neglect the many advantages offered by BAAS, departments of history, the Queen's University, Belfast.



"Fort George, with the City of New York from the SW," from an engraving of about 1740 (John Judkin Memorial Collection—see article page 20).

USIS has played a powerful and helpful role in the explosion of personalities and qualities of cultural attitudes of distinction, such as Professors Cleanth Brooks, Edward D. Myers, Robin Winks, Wayne Wilcox, whose death with his family in the Paris air crash we still mourn, and, of course, Charles Ritchson. Among their many activities, the most recent includes the forwarding of conferences and the formation of regional or local groups of interest. Local initiative is also one of the most healthy signs of the vitality of BAAS, shown in the development of local chapters of the Midlands for example.

Another powerful stimulus to the promotion of American subjects has come most recently from the Department of Education and Science. The Anglo-American history teachers' conferences held at California Institute of Technology in the summer of 1973, and at the University of York in 1974, revealed the vast amount of work to be done in helping teachers and educational administrators of both countries to define their aims, and improve their techniques by sharing information and exchange-

ing ideas about curricula, materials and equipment. The increasingly sympathetic involvement of the HMI in this field, as part of their long term programme of international cooperation, is most encouraging. They can bring their knowledge and experience of many different types of schools to focus on American subjects, recognizing and criticizing also helping teachers and students to an effective study of the United States.

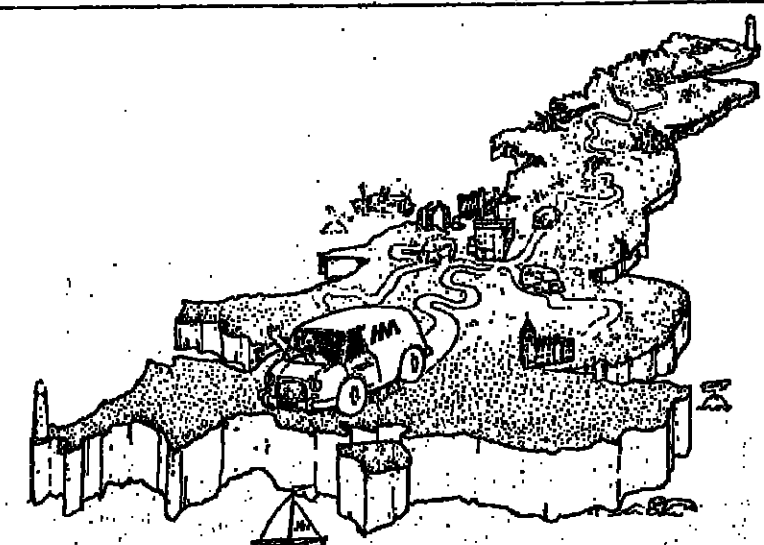
An important residential course on the United States in the contemporary curriculum, course number 6554, has been organized for teachers in all kinds of secondary schools and for lecturers in further education and higher education. Catherine's College, Oxford, from August 30 to September 4, 1976. The will be emphasizing content rather than methodology, each of the four full days dealing with a central theme. Teachers interested are invited to obtain further details and application forms from the DRS, closing date March 31.

Among the many results of the recent Anglo-American conferences

is the development at primary and secondary level of emigration studies. These have begun promisingly, though not without initial difficulties, in North Wales (Secretary D. Jones, HMI) and in Cornwall (W. Edwards, HMI) where individual schools have linked with American schools and collected material on members of emigrant families from their areas. One day conferences for interested teachers are being held in Bangor Normal College and Fawcett teachers' centre in February.

Across the Atlantic great enthusiasm and goodwill in sponsoring these projects have been shown by Mr Matthew Downey, department of history, University of Colorado, Boulder, Colorado 80302. Already some fascinating material from migrant families has been revealed. Barry boys' school has produced a booklet on the subject of these families and is beginning to examine their fortunes in North America.

The linking of schools in transatlantic study projects is part of the promising plan undertaken by the Associated Examining Board, launching their American studies O/A level paper for the 16-plus



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Two museums

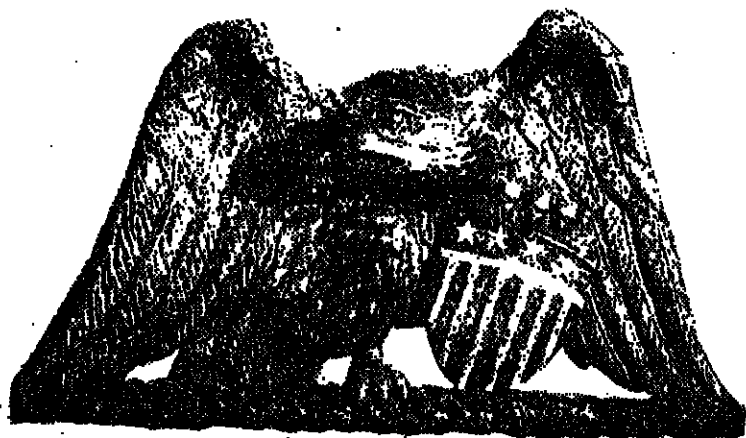
Claverton Manor and the John Judkyn Memorial

Despite our aspiration to an egalitarian educational system, connoisseurship of fine furniture and other decorative arts is regrettably seen as an elitist activity. Indeed, the word "connoisseur" is well nigh obsolete, the fashion for collecting antiques so often arises from a materialistic preoccupation rather than an aesthetic and scholarly one.

The American Museum in Britain at Claverton Manor, Bath, was opened in 1961 by two cognoscenti of the American decorative arts. This is not to say that American history may not be read into the collections at Claverton. Further down the hill, the village of Freshford, lies the village of Freshford. Here at the manor is the headquarters of the John Judkyn Memorial named in memory of the late co-founder of the American Museum. The memorial was established in 1964 to meet the demand for information on the history and culture of America from schools (visual aids) and museums (exhibitions).

The kits for schools consist of a glass-fronted box containing a group of genuine objects that have been selected to describe a particular theme. Teachers' notes are provided in such a way that they can be ignored if considered inappropriate for a particular project or age group. Among the subjects available are the following: Hawaii, Jamestown, eighteenth-century New England, the Pennsylvania Germans, the Shakers, nineteenth-century lighting, the American Indian by (regions), the Eskimo, the War of Independence, slavery, the Civil War, the opening of the west. Demand for the last six of these exceeds supply. Apparently some schools would not look at the North American continent at all.

While acknowledging the fact of this subject, it is a pity the opportunity is not always used to interest in alternative areas of study. The kit on nineteenth-century lighting devices may have a dry title but behind it the discerning teacher will see J. M. W. Turner and Moby Dick.



A carved wood sternboard of the American Eagle from the author's collection at Freshford Manor.

Kits are sent to schools all over the United Kingdom and it is estimated that they are seen by 23,000 children a year. Schools requiring further information should write to the John Judkyn Memorial, Freshford Manor, Bath (enclosing in these days of ever-rising postal charges, a stamped addressed sticker—not an envelope).

The Bicentennial of the American Declaration of Independence will, no doubt, be celebrated or commemorated (according to your point of view) in many ways during the course of 1976. The now well-worn but once powerful cries of historic American freedom fighters—"Unite or Die" and "Give me Liberty or give me Death"—will be invoked again as will the words of the Declaration of Independence itself.

In the United States "Life, Liberty and the Pursuit of Happiness" may describe an ideal but it means little in Europe unless one has a picture of the quality of the life, the extent of its liberty and the degree of happiness that these and other factors have conferred on Americans in the past 200 years. This type of information is perhaps best transmitted through exhibitions.

During the course of the year a number of exhibitions on various aspects of the American way of life will be touring Britain. Many organized for the Bicentennial come from the John Judkyn Memorial, a number of whose exhibitions have toured the United States and exhibition of sixteenth-century copperplate engravings of the early voyages to the Americas. By Theodore de Bry will be seen as far afield as Athens and Reykjavik, Rome and Helsinki.

Nearer home the memorial is touring an exhibition on the theme "Presidential Elections". It con-

tains an indescribably diverse series of objects: toy jugs in the shape of presidents, bars of soap for Goldwater, collecting tins for McGovern ("Small change for big changes"), painted coasters (the Harrison's hard cider and log cabin image), mechanical money boxes, the elephant of the Republicans, the donkey of the Democrats, portraits, lithographs, photographs, drawings, cartoons, posters, banners, buttons and no less than three campaign torches from the torchlight parades so popular in the late nineteenth century. In order to make this diverse fare more easily digestible the exhibition is divided into the following themes: the Founding Fathers, the era of the common man, Lincoln, factory and city, normalcy, the New Deal, the recent past, women in politics, third party movements, the vice-presidency, torchlight parades and campaign buttons.

Other exhibitions include printed maps of America 1530 to 1970, slavery, American cowboys, the American Indian, photographs by Edward Muybridge, early views of New York. Many deal with art or a craft of the country and reflect the agrarian charm that was America before the Civil War, for example, early American stone sculpture.

All these activities are organized by just three people beaver away in the otherwise quiet surroundings of the village of Freshford. Arrangements to borrow kits or exhibitions may be made in writing and details established over the telephone but for those who can reach the manor in person, the opportunity should not be missed to visit this charming Queen Anne house with its superb furniture and remarkable collection of English folk art. The house is not open to the general public.

James Ayres, Director,
John Judkyn Memorial



Portrait of Christopher Columbus by Theodore de Bry. The John Judkyn Memorial exhibition of "de Bry and John White" is at present touring Western Europe.



Portrait from "Poems on Various Subjects, Religious and Moral by Phillis Wheatley, Negro Servant to Mr John Wheatley of Boston in 1773. From 'The Negro as a Slave in America' exhibition (John Judkyn Memorial).

Advice and resources

The Cultural Affairs Office at the American Embassy in London is under the direction of the cultural attaché, who traditionally is an outstanding American academic seconded to London. The office devotes a good part of its efforts to encouraging and supporting American studies in the United Kingdom, from secondary school upwards.

It is a reference point for inquiries from all over Britain, guiding people towards sources of materials, arranging for visiting American speakers, offering the services of its specialist reference library.

The office sees its job as a wide one, attempting to give exposure to the best in American thinking and creativity. Every year it arranges academic and current affairs conferences and seminars in cooperation with the American studies departments of universities, polytechnics and varied cultural and political groups, providing an opportunity for the exchange of ideas between British American studies specialists and visiting American academics, writers, figures and leaders in the arts.

One-day conferences for teachers and sixth-formers on American themes are held throughout the school year. Exhibitions are often on view at the Embassy or on tour around the country.

The British Association for the Study of the United States, founded in 1953, promotes the study of the United States, welcomes applications from people with a scholarly or professional interest in the country's politics, economy, government and literature and thought. Its Newsletter is published twice yearly and

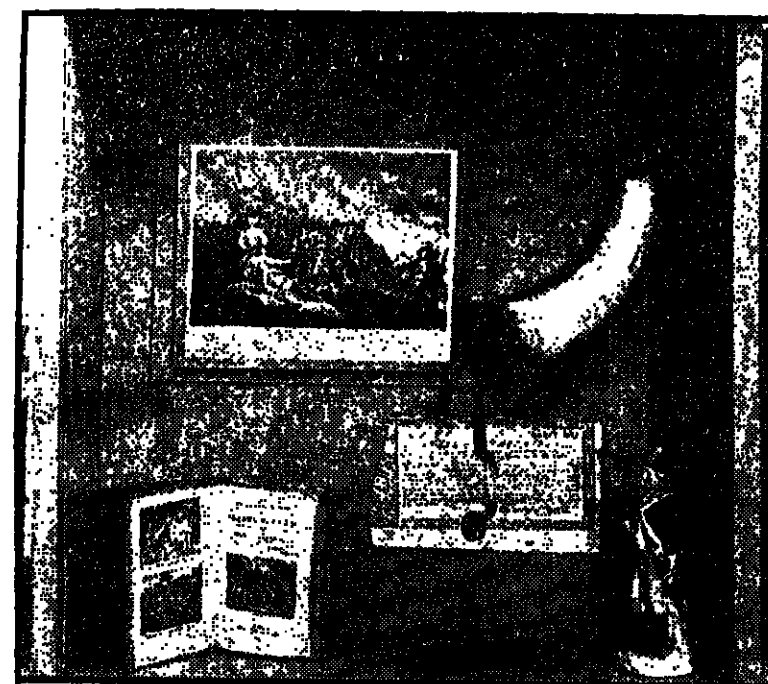
the *Journal of American Studies* three times a year. It holds an annual conference. The chairman until 1977 is Professor Harry Allen of the University of Essex. The secretary is Mr A. H. Graham of Belfast and the Newsletter is edited by Mr Mark Leaf of Durham.

An important influence in the development of American studies in schools is the Bicentennial Partnership Project (see page 19). The concern of the DES history inspectors is reflected in their plans for a conference in the spring of 1976 entitled "America in the curriculum".

The US/UK Educational Commission (26 Dover Street, W1, 01-629 2191 Mr John Herington, Director) administers the Fulbright-Hays Programme sponsoring travel and study in the United States by British lecturers and postgraduate students. Under the same roof is the student adviser (Miss Margaret MacDonald, 01-499 5088) who answers inquiries about study and research possibilities in America.

Two useful resources are the directory of senior American academics in the United Kingdom, published about November each year by the Cultural Affairs Office; and *American Studies in Britain*, a series of teaching and research published occasionally (most recently 1975) by the Institute of United States Studies of the University of London (see also page 21). Leaflets are available on such topics as British sources of American books and periodicals and, for the bicentennial, there is a catalogue of background information and materials available in the United Kingdom.

Two museums (continued)



Two forms of exhibit from the John Judkyn Memorial, described on opposite page: one of the kits circulated to schools and, below, a display of American cowboys from an exhibition at the Victoria and Albert Museum, London.



Schoolchildren from Ross on Wye in "Conkey's Tavern", a reconstruction in the American Museum in Britain, Claverton Manor, Bath, described below.

From early European exploration of the west, the American Museum in Britain presents a wide-ranging view of American history. Period rooms dating from 1690 to 1850 have been transported from places as far apart as New England and New Orleans. The American Indian and the Spanish Southwest, marine history and transportation, textiles and silver; these are just some of the many subjects represented in the collection.

The museum education department arranges visits for school and college groups, which come from many parts of the country. Day visits from London, the Midlands and South Wales are common, while many residential courses in the area include visits to the museum. Various teaching aids are available, including notes for teachers, the loan of slide sets, intra-mural and extra-mural lecture service, films as part of a visit, and a reference library.

The new education centre serves as a reception/work area for visiting groups, and has audio-visual equipment, a store for "Please Touch" material, a sales counter and temporary exhibition space. For full details of the educational services, as well as information on special arrangements for the Bicentennial of American Independence in 1976, contact the education department, the American Museum, Claverton Manor, Bath (telephone: 60503).

G. M. Candler,
Director of Education,
The American Museum in Britain.

Cowboys and Indians plus: disentangling fact from fiction

Barbara Currie, Rolle College, Exmouth, writes about American studies in primary and middle schools

There is no doubt which aspect of American Studies is most popular in primary and middle schools—the American West, and particularly, the American Indian. It is a subject on which most children have some ideas, however inaccurate, and one which appeals to many adults as well.

It has many possibilities for integrated project work. The study of American Indians and frontiersmen involves (or should do) work on the land where they lived and the climate they adapted to. There are many good stories and legends, from Hiawatha to Paul Bunyan, as well as some good historical novels like *Ruth Under the Arctics*, *Singer* and *Laura Ingall Wilder's* frontier series.

There are the interesting lives of groups like the Iroquois or the miners, and of individuals like Sequoia or Jedediah Smith, whose life was well portrayed in the recent BBC series *The Explorers*.

There is scope for dramatic work in the stories and events of everyday life such as a Buffalo Dance, or a barn-raising. There is a wealth of folk song material, as well as some more modern music like Copland's *Billy the Kid*.

Contemporary paintings and photographs, songs, artefacts and written accounts are fairly easy to obtain and many aspects can be understood by the 8-12-year-olds. Whitman Barton Middle School in Exeter spends a whole term on this subject with 11-12-year-olds.

So much of the popular presentation of the subject is inaccurate, or dwells only on the dramatic and violent episodes. But the Indian tribes present great opportunities for understanding the relation between their culture and the environment in which they lived. The variety of their culture is so interesting that it is a pity to lump it all together with "western" poles in front of tips and frontier war-bonnet on the heads of Cheyenne. Since most cowboys spent most of

their lives working, it is a pity to show the typical cowboy-puncher as a gun-toting idler.

In fact, because the legends are so well known, it is a good topic for teaching children how to disentangle fact and fiction, and since fact is often as exciting as fiction, it does not spoil the fun.

One of the advantages of studying America is to introduce the children to a country which is foreign, but which has a similar language. Many children have relatives in the United States and in Canada, which offers a ready-made topic for emigration. The children of Froedryll Primary School, Pwllheli, have photographed the houses and chapels of the emigrants from the area, found out some of the reasons for emigrating, studied the trials of people going to the New World, and the places they settled in when they arrived.

Roskears Junior School, Redruth, having started to study emigration from the area, are hoping to establish contact with a school in Central City, Colorado, where many Cornish miners emigrated. There are several more schools in Wales and Cornwall engaged in similar work, helped in America by Professor Downey of the University of Colorado.

Emigration has local application in most places in Britain, although it is not always easy to study in areas where there is no easily identifiable large group of emigrants (like the Welsh and Cornish miners). It has the advantage of involving familiar places, and yet extending out to far countries. Most of the places associated with emigration are still to be seen and can also be studied in old maps and photographs, directories, local newspapers and archive material.

Letters from emigrants, whether in published collections or originals (like letters in Carnarvon from a Corporal John Jones, a Welsh emigrant who served in a Wisconsin regiment in the Civil War), often

give a chronicle of everyday life which is comprehensible and interesting to children. Some areas have prominent individual emigrants with remarkable lives although not all places can produce a Pinkerton, Carnegie or Alistair Cooke.

This school of study could be of equal interest to children in America. The exchange of information with the corresponding group of children can be a useful study. By exchanging letters, tapes, photographs and written accounts of their school and neighbourhood, they can build up pictures of the two communities, and what they live, which would be more immediate than a study based mainly on books and materials. News in late November that a Montreal school has just flooded its playground ready for ice-skating until March may give young children a greater understanding of the Canadian winter than theoretical studies of climate and temperature.

If schemes involving direct contact with schools, or using archives, seem too ambitious (or possibly too expensive) North America is still a good topic for work based mainly on books, pictures and tapes. It is too vast and varied a continent to study in general, but studies of particular features like the national parks (whose animal life and dramatic landscape will appeal to younger children) or of a river like the Mississippi, or of an area like New England, will narrow it down to something manageable.

New England, along with the other former colonial areas, may be particularly attractive in this bicentennial year and life to the colonies on the eve of the revolution, the people and events of the year, and the doing on both sides will offer considerable scope. As the textbooks in both countries demonstrate, however, there are dangers of over-simplification. A "then and now" exploration of the topics associated with the revolution might bring equal interest and more understanding.

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The 1776 Exhibition is being staged at the National Maritime Museum, Greenwich, from 15th April to 2nd October 1976. Refreshments will be served at school parties and

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(Would you please read the notes before applying and type or use block letters throughout.)

Name		
Name and address of school		
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Date of booking Monday		
Time of booking		
Number of places	Adults	Teachers
Date of application	Signature	

NOTES

1. Places may be booked for any time of the school year (from 10.00 am, and finishing at 2.00 pm, for admission on 15th April 1976, all days including 17th April, 19th April, 21st April, 23rd April, 25th April, 27th April, 29th April, 1st May, 3rd May, 5th May, 7th May, 9th May, 11th May, 13th May, 15th May, 17th May, 19th May, 21st May, 23rd May, 25th May, 27th May, 29th May, 31st May, 2nd June, 4th June, 6th June, 8th June, 10th June, 12th June, 14th June, 16th June, 18th June, 20th June, 22nd June, 24th June, 26th June, 28th June, 30th June, 2nd July, 4th July, 6th July, 8th July, 10th July, 12th July, 14th July, 16th July, 18th July, 20th July, 22nd July, 24th July, 26th July, 28th July, 30th July, 1st August, 3rd August, 5th August, 7th August, 9th August, 11th August, 13th August, 15th August, 17th August, 19th August, 21st August, 23rd August, 25th August, 27th August, 29th August, 31st August, 2nd September, 4th September, 6th September, 8th September, 10th September, 12th 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Team work: towards Atlantic community

John Sewell, founder-chairman, the European Atlantic Movement, examines the real meaning of interdependence

TEAM offers services which are complementary to these studies. In cooperation with U.S.S.R., polytechnic, universities, colleges and technical schools, further education, teachers' centers, groups of schools, and the like, TEAM sponsors conferences, seminars and meetings of all kinds and at all levels, which give its participants opportunities to meet, hear and question some of those involved in the study of the U.S.S.R. and American affairs; diplomats, parliamentarians, business men, journalists, national and international civil servants, et al. This provides valuable complementary background knowledge of great practical relevance to academic studies. In addition, TEAM publishes a series of professional publications, which, like its other activities, appear to meet the need.

It is interesting to see who happens to the former holders of these scholarships. Few wander off to travel for its own sake. Most engage in occupations or professions involving them closely with other people.

Full information about the scholarships is obtainable from the English-Speaking Union. The school provide free room board and tuition, parents paying travelling and incidental expenses. Candidates should be between the ages of 17; and 18; and applicants should normally have completed A levels. Two types of scholarship are available. One is for an academic year of three terms from September to June, and one for the two terms from January to June. The latter is intended chiefly for candidates taking 'University Entrance' examinations in March and December, who are therefore unable to enter for a full year scholarship.

A booklet describing other Harvard titles in American History is available from 126 Buckingham Palace Road, London SW1W 9SD.

HARVARD UNIVERSITY PRESS

CINDERELLA NI HOULIHAN?

Maurice Hennessey on Irish education

A Mirror to Kathleen's Face: Education in Independent Ireland, 1922-1960. By Donald Horman. Atkinson, McGill-Queen's University Press, Montreal. £35.50.

Professor Donald Horman's history of education in Southern Ireland, 1922-1960, is not just a fascinating and informative document but one which will provoke much more than its fair share of controversy. (Kathleen ni Houlihan is a traditional romantic name for Ireland.)

From the Irish viewpoint the book gets off to a patriotic start since it contains a somewhat frightening exposé of Ireland's educational system in 1920 when A. N. Bonaparte wrote, in a highly placed Catholic education official's declaration in the primary sector were an insufficiency of teachers' salaries, a lack of qualified teachers and a consequent inefficiency in school work. He did not put all the blame on the British government; it was very caustic on the subject of the little local interest in education which the Irish themselves displayed. At the secondary level the same commentator suggested: "If the state of Irish primary education is unsatisfactory, that of secondary education is deplorable."

On the subject of the Catholic church's power over education after independence in Ireland, Professor Horman is quite merciless in his outburst. Not only does he point out that, in the words of that famous French Catholic ecclesiastic, Jean

Blanchard, written in 1960: "The bishops of Ireland appear to have more power, in practice, than those in any other country in the world", but he also quotes from the pastoral issued by the bishops in the past two decades. John Charles McQuaid, former Archbishop of Dublin: "Only the church is competent to declare what is a fully Catholic upbringing; for, to the church alone, which He established, our divine Lord, Jesus Christ, has given the mission to teach mankind to observe all things whatsoever He has commanded. . . . Accordingly, in the education of Catholics every branch of human training is subject to the guidance of the church, and those schools alone which the church approves are capable of providing a fully Catholic education."

Professor Horman is very honest when dealing with what is part of the great Irish paradox and its love-hate relationship with other denominations: the Irish government's response to the Protestants' problems. "By reaffirming the principles of denominational education but in a very generous manner" it framed special rules allowing the minority to operate schools with fewer children on the rolls than was permitted for the Catholic majority. He points out, for example, that when the department of education normally required a minimum average daily attendance of 20 pupils for a primary school to be "recognised" and thus eligible for a state grant, in cases

where Protestant children could not find a religiously acceptable school at a convenient distance, the daily attendance requirement was lowered to 10 pupils. Even then the school's average attendance actually had to fall below seven pupils for two successive calendar years before the grant was withdrawn.

The controversy over the Irish language does not escape Professor Horman's objective analysis. He refers to the second Minister for Education under the Irish Free State, John Marcus O'Sullivan, and quotes him: "I did start this particular system in the hope that we might make Irish, and that we should make Irish, a living language. But I never deluded myself that I had the enthusiastic support of the great bulk of the people of the country." Those familiar with the recent changes in the "compulsory" rule in the present-day Republic will find sympathy with the minister's attitude even if they may resent it.

Professor Horman has taken it upon himself, in this otherwise excellent work, to make prognostications for the future—a dangerous thing to do on any subject where Ireland is concerned. He highlights the academic snobbery which exists at the moment and indicates that if Irish education is to be a worthwhile purpose other than an emigrative one, technical and vocational instruction must cease to be the Cinderella of education—a fate it has suffered right up to the present moment.

NOSCE TE IPSUM

John Rowan on self-knowledge

Know Your Own Personality. By Hans Eysenck and Glenn Wilson. Temple Smith £3.00. 085117 0897.

As the authors say, this book takes its place beside *Know Your Own IQ* and *Know Your Own IQ*. It purports to enable the reader to check his or her own Extraversion/Introversion (with seven subscales, including Activity and Reflectiveness), Emotional Instability/Adjustment (with seven subscales, including Self-Esteem and Obsessiveness), Tendency to be Tense/Relaxed (with seven subscales, including Empathy and Dogmatism), Sense of Humour (with four subscales, including Non-sense and Aggression), Sex (with 11 subscales, including Permissiveness, Prudishness and Fulfillment, and three super-scales—Sexual Libido, Sexual Satisfaction and Masculinity), and Social and Political Attitudes (with seven subscales, including Racism and Progressivism, and two super-scales—Radicalism / Conservatism and Tough-mindedness / Tender-mindedness).

One might expect to see some use of Glenn Wilson's Conservatism scale, which at least has the merit of simplicity, and which he has now been using and writing about for several years, but all the questionnaires are in the familiar Eysenck mould of rather lengthy questions. It is hard, indeed, to see exactly where Wilson comes in at all, unless it is on the Sense of Humour and

Sex questions, which are by far the weakest in the book. All the scales have been used and published. Eysenck over and over again. I scored myself on every scale. The book (by the way, quoted on page 183 is missing) and the report that the Tough-mindedness scale of Chapter Four is totally different from the Tough-mindedness scale of Chapter Five is a little confusing. The main objection to books like this is that they give a spurious air of reality to qualities which are in reality neither exact nor fixed. Ten years ago I used to be out as an introvert on these scales and now I come out as an extrovert. According to these authors, it is impossible — "Personally I am the same but as intelligence for the genetic influence is overridingly strong, and the rule of environment in most cases is reducing effecting slight changes and not a kind of cover-up."

They even believe that people's attitudes "are in good part determined by genetic causes". In a case it would perhaps not be a kind of surprise that we need little notice of the author's opinion since they obviously came out from their accidental arrangement of their parents' chromosomes. I believe that people can be themselves, and can change, and can even do both at the same time. But instead of sitting alone with a book like this, I have personally found it more productive to get an encounter group. More later.

PAPERBACKS

DIAGNOSING OUR ILLS

Catherine Basham

Management and Unions. By Allan Flanders. Faber Paperbacks £1.60. 0 571 10711 7.

This release of the collection of essays first published in 1970 is very welcome. As Professor Hugh Clegg says in his introduction: "It is a pity that they are not compulsory reading for all politicians, journalists and company chairmen before they air their views on trade unions." You would only have to make the first few paragraphs of the first essay compulsory—they are so well-written, informative and so interesting that few who got that far would want to stop.

The essays discuss the nature and purpose of British trade unions, and collective bargaining, where Flanders considered the key to understanding our system of industrial relations was to be found. Most of us, at one time or another, have had a mope about the state of our industrial relations, and have ascribed to that state all manner of ills; how about spending £1.60 finding out what it is really like, why, and what can be done about it, as considered by many to be the world's outstanding expert on the subject? This would be a splendid book for sixth-formers.

Creativity in Industry. By P. J. Whitfield. Pelican Books 60p. 01 02 1901 3.

Unless you have a special interest in an individual psychologist as managing director of a firm, which you feel is lacking in industrial innovation—you will unlikely find this book interesting enough to finish. There is a lengthy discussion of what creativity and innovation are, and what of the "creative personality" is a look at the importance of the difficulties involved in defining problems, quite a bit on the way approach to innovation, and a list of five British innovators.

We Plough the Fields. By Trevor Brough. Pelican Books 110p. 14 02 1972 6.

Mr Brough finds that, by and large, we are uninterested in and misinformed about British farming. I am sure that he is right in saying that something should be done about this, but *We Plough the Fields* will not do it. It is a very big book, a national thinking; the title tends to confirm a view of farming as old-fashioned and dull, boring and worthy, and the book, while it provides evidence that British culture has a high productivity in the past 30 years, comes across as near gripping the attention.

DISEMBODIED TRUDGE

Laboratories of the Spirit. By R. S. Thomas. Macmillan £2.25. 333 18510 2.

This is an abstract (as well as abstracted) book of verse, all in the mind, and divorced from the body. It is just the sort of thing calculated to appeal to disembodied reactionaries like the older Anne Thomas is once again trudging through various interior and exterior landscapes, emerging in his own ghostly words "lost the

adult geometry of the mind". He is preening up the evidence of his Christian myth. As if it is not possible to write satisfactory poetry for oneself as well as for others from the reality of one's own body is not. Oh for a sample of these badly neglected (but brilliant) reactionaries George Gurdjieff or P. M. Matthews Alexander, founder of "The Alexander Technique". Their poetry might once again become an embodied means of exploring man's inner potential. John Burt Foster

Frank Lipius is at present on the staff of *The New Hungarian Quarterly*. Ned Thomas is a lecturer in the English department at University College, Aberystwyth. John Rowan's latest book, *Ordinary Ecstasy*, is shortly to be published by Routledge and Kegan Paul.

Challenging the myth of expertise

by Cherida Mares

Learning Kit for Trainers of Adult Literacy Tutors. Adult Literacy Resource Agency, 33 Queen Anne Street, London W1 MOAC, E4.

Many adult education centres are being asked to run courses to train the volunteer tutors coming forward in response to the national literacy campaign. As there are few resources available which give immediate practical help, the *Learning Kit for Trainers of Adult Literacy Tutors* is particularly welcome.

The kit is essentially practical and based on considerable experience of training tutors. This is immediately apparent from the letter which accompanies the pack to ensure that volunteers fully understand their commitment and the difficulties they are likely to encounter. The letter emphasises the necessity for sifting out preliminary briefing, selection and interviews before training begins.

Although previous experience of teaching reading might be assumed to be a prerequisite, the kit makes no such assumptions. Many tutor trainers have no relevant experience. Acknowledgement of this is fundamental to the adult literacy project, essentially a community activity in which committed members of the community take responsibility for remedying the failures of formal education. In so doing, it challenges the mythology of expertise in teaching an elementary communication skill.

The kit consists of six lesson packs and a section of general information for the trainers. There is also a cassette which gives helpful examples of different reading difficulties and of a first meeting between tutor and pupil.

The materials are designed for ease of handling and reference, with background reading, practical preparation, lesson content and training methods clearly set out in coloured loose sheets. Standard and alternative approaches for each lesson are suggested, the choice depending on factors such as the size of the group and the tutor's previous experience and confidence.

It was anticipated that volunteer tutors would have different motives and educational background, some would have had no further education, others would be highly qualified. The kit is therefore intended to support trainers new to adult literacy work as well as to provide new ideas and materials for the experienced.

Preparation of teaching/learning materials for an unknown but homogeneous group is a hazardous undertaking; complications proliferate

when the group is expected to have little in common except motivation. Despite these difficulties, the authors have attacked the problem constructively and produced a series of materials which draw on the motivation and general experience of the group by encouraging discussions, simulations and role-playing. To this is added carefully structured information on teaching basic reading and pre-reading skills.

The early teaching units examine the advantages and disadvantages of different methods and suggest alternatives. Later units deal with ways of extending basic reading and writing skills. The guidance is concerned not only with spelling, the assessment of the level and difficulties inherent in different reading schemes and materials, but also with planning lessons for each student and with keeping records and evaluating progress.

Although only six lessons, a course can be laid in six lessons, experienced tutor trainers believe that the initial screening period and these lessons will equip tutors to meet students and begin to practice what they have learnt. However, support, advisory and referral services must be available.

Some areas not covered in depth are dealt with in more detail in the *BBC's Adult Literacy Handbook*. These include studies of emotional and physiological difficulties faced by adult learners, and of those with reading difficulties in particular, a section on the reasons for illiteracy.

One fact that emerges from talking to adult pupils is that many of these "failed" adults believe that the education system has let them down. If we accept the unrealistic fact that many adults have failed to learn to read because of the inadequacies of the system, we must also accept that some revision of that system and methods of training teachers to teach basic skills is essential. Perhaps if learning materials for student teachers were developed along the lines of this excellent pack, training tutors for adults with reading problems would eventually become outdated and unnecessary.

This learning kit is a model that could be extended to other areas. Many teachers and lecturers are convinced that a similarly structured approach should be used in all initial teacher training and that students would benefit from clearly defined guidance on essentials, such as teaching reading and spelling, the recognition of early difficulties and failures, remedial strategies and the selection of appropriate learning materials.

CET open video copying service

by Owen Surridge

Three universities and a polytechnic are combining to set up an experimental video copying service to help with the distribution of videotapes and films produced in higher education institutions. The scheme opens in January under the auspices of the Council for Educational Technology, who will assess the results of the first year's work and decide whether it should be permanent.

The aim is to overcome format difficulties presented by different equipment. Copying centres will provide copies of programmes on the Philips VCR format, which is the most widely used, plus two others—U-Matic and EIAJ Cartridge (National Panasonic). Transfers will be available from five of the most common video formats and also from 16mm film.

The service is limited to higher and further education and to programmes or films produced in the institutions concerned. Copies will not be made without the authorisation of producers and arrangements covering copyright and performance rights will have to be cleared before orders will be accepted.

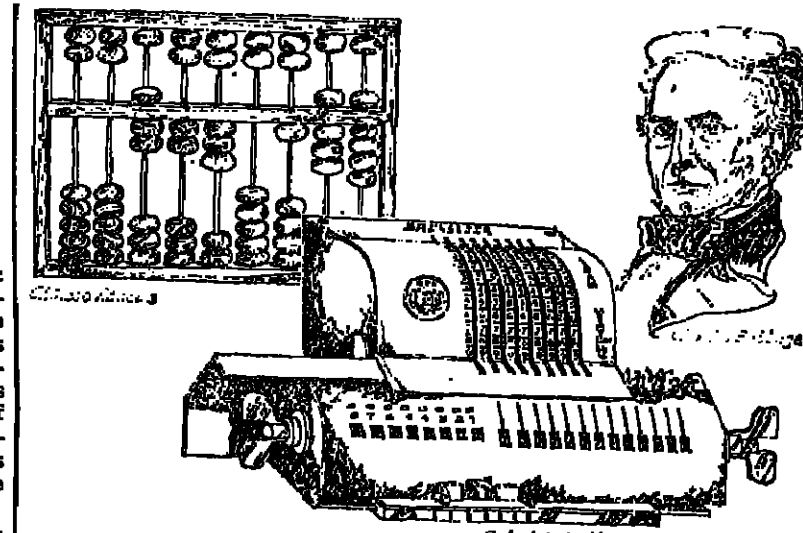
Under the standard rate card that has been arranged for the scheme, costs will vary from £20 for the first half-hour of copying time to a maximum of £52 for an hour, the precise figure depending on format, tape size and other factors.

The services involved are those of Birmingham University Television and Film Unit, Chancery Court, PO Box 363, Birmingham; the Heriot Watt University Television Centre, 31-35 Grassmarket, Edinburgh; the London University Television Service, 11 Bedford Square, London WC1; and Plymouth Polytechnic School of Electronic Engineering, Hoe Centre, Motte Street, Plymouth.

Other services are to be offered by London and Birmingham universities; the former can arrange monochrome transfers in certain categories of IVC, VCR, Ampex and Sony material; the latter to transfer from 2in QUAD (high band and low band monochrome) to VCR and U-Matic. Plymouth Polytechnic also offers film transfers, and the transfer of non-standard formats (such as 8mm film) to tape through optical transfer techniques.

The CET are anxious to receive comments about the service and suggestions for improvement.

Coordinator for the pilot project is Mr Geoffrey Crab, CET, 3 Devonshire Street, London W1.



Above: a Chinese abacus, a calculating machine, and one of the inventors of calculating machines, Charles Babbage. Below: children using the video display unit, part of the new exhibition.



Computing Then and Now, an extremely ambitious exhibition which aims to give a comprehensive explanation of the basic principles of computers and how they are programmed and used, was opened this month at the Science Museum in South Kensington, London. The exhibition occupies a large section of the second floor of the museum. It includes parts of early computers, punched card machines, a selection from the museum's collection of calculating machines and earlier aids such as Napier's Rods and forms of abacus, and ends with a modern computing section.

Also on show are gunnery instruments, slide rules, colourful polyhedra, displays of analogue and hybrid computers, and a display showing how computers are used in the creative arts. The visitor can operate working displays and there are telephone commentaries for some models. The museum is open from Monday to Saturday from 10.00 to 18.00 and on Sundays from 14.30 to 18.00.

postage and packing. Orders and inquiries should be sent to Shirley Green, *The Times Educational Supplement*, Room 255, PO Box 7, New Printing House Square, Gravesend, Kent. Tel. 0474 8372. Payment should accompany the order and be payable to Times Newspapers Ltd. Please allow 28 days for delivery.

Schools Prom record

Music from the first ever Schools Prom is now available on a double record album, produced by *The Times Educational Supplement*. It was recorded live at the Albert Hall and features all the 12 groups which took part.

The album is available from Times Newspapers at £3.75, including

Vision and contemplation among the Canterbury cloisters

A new religious education centre will soon be opened at Christ Church College. Elsie M. Ayleen reports

The religious education resource centre at Christ Church College, Canterbury which will be opened early this year, like the few other centres already in existence, is designed to bring some order out of the chaos referred to in a previous article (TES, 3.10.75). By the very nature of the subject, which is concerned with all peoples, at all times and every place and every aspect of their lives, there will be no limit to the resources available. There will, inevitably, be a great deal of overlap and, inevitably, legitimately so, among those teaching religion, and aids produced to implement these various objectives. The aims of different groups, such as the churches, voluntary societies, and the schools are not, however, mutually exclusive but often overlapping and the materials, similarly, may be multi-purpose.

What the specialist teacher requires is the opportunity, for viewing audio-visual material at leisure. Agencies such as the Christian Education Movement already provide a valuable service

with guidance fed into the movement from teachers' panels at all age levels. The missionary societies and parish-centred bodies also have a variety of publications, and the resource centre can provide a shop window for them. Much more, though, teachers need to be able to talk to colleagues about how such materials can be used. This means coordinating and cataloguing of what is available and a place where teachers and others may meet in comfort, talk and work.

The non-specialist teacher needs more than this. There have never been enough specialist teachers and the subject has been taught largely by enthusiastic and dedicated non-specialists. This is so, even though at Christ Church College alone there are about a hundred students training in the religious studies department. Changes in the approach to the subject need to be discussed, the ways in which a contribution can be made to team teaching or an integrated topic, how, to use the "religious" significance of cross disciplinary themes. In these and

similar areas non-specialists need and seek help.

After the uncertainty of the post-Goldman era, there is a renewed interest in the Bible as a primary source for the presentation of Christianity. If we are not to repeat past mistakes it is essential that teachers working parties discover the right use of the Bible at different stages in the school. The introduction of world religions into the syllabus to meet the needs of a multi-religious society, and to give a proper perspective on the history of religion pose difficulties. It demands a careful examination of aims and objectives, of materials and methods, in an area which is totally unfamiliar and often alien to many of those who teach Religious Education. At what point teaching can only be implicit and at what explicit, these and many other points, need to be thought through together.

In Canterbury, we are fortunate in having a close liaison between the religious studies department of the college, its library and technical staff, the county inspector of religion

education and the schools library, the warden of the teachers' centre, and the director and staff of the Canterbury diocesan education committee. Canterbury is an excellent centre for religious education, with its college of education, university, cathedral and the Religious Studies Centre. The new religious education resource centre will make full use of all this expertise.

An office will be open for certain fixed periods each week, to give advice and a telephone service will take requests and make appointments at other times. Specialized day conferences and courses are being planned which will complement work already going on in the county and the diocese. The cooperation of the schools library service will extend the availability of resources into the school. The diocesan schools advisors, several of them on the college staff, will be another means of reaching them, particularly the church schools in this case.

From time to time, lists of new

publications will be prepared, with which reviews indicating the age and ability for which they are suitable. There are also plans to produce, in cooperation with the college art department, topic kits using photographs and duplicated material. By this means resources only available in this part of the country, which is unique in the history of Christianity, can be reproduced for more general use. The diocesan "diocese" office, for parish education, will be working as a focal point for information and training of parish leaders too, and is helping to select stock for this purpose.

Openings in one of the essential elements in the new Religious Education as it is in dialogue within the church and between adherents of different life stances. Similarly it is when we are open to the way in which colleagues in other areas of Religious Education and in other subject areas can help us that we can make the maximum use of resources and opportunities. The operation and coordination are the

keynotes of this project.

GAMES CHILDREN PLAY

The World Book of Children's Games. By Arnold Arnold. Macmillan £4.50. 333 19130 7.

This is a well-presented hardback that will catch the eye of children, parents, teachers and people who lead organized activities or groups of children. With children aged four to 12 in mind, different classes of games are described in nine chapters, such as "Word games", "Hop, skip, jump", and "Strategic games". Each chapter begins with a brief introduction, and then games are succinctly described and clearly illustrated by diagrams and testfully selected pictures from a variety of historic sources.

At the end of the book a useful chart is provided showing the age of child for which the game is most

suitable, the place where it can be played and the minimum materials required. The author makes only passing reference to the rhymes, chants and song which accompany many ball of accompaniment games. But this type of game, the author seems to underestimate the importance of this ritualistic element.

In his introduction to the book Arnold Arnold claims that children need to play within clearly defined rules to ensure mature social development. While few people would quarrel with this view, one might not agree that there is a sinister decline in such game playing caused largely by the "usual" television boyzerman and negligent parents. It is my experience as parent and tea-

cher that the playing of games with rules, and the invention of such particular games in development and prevention of injury to anything to

This is not the encyclopedic book one might expect from its title. It is only in the last chapter, "Strategic games", that serious cultural and historic references are made. Otherwise there is only superficial bibliography, however, surprisingly wide and comprehensive. This leads me to believe that a more substantial work could have been produced and this was confirmed by the author himself who asserted that a whole volume could have been written about a particular type of strategic game.

Pat Palmer

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Ideas,
argument, experiences,
research

TALKBACK

How a commerce department goes beyond shorthand and typing/
Local studies: history, geography or neither?

Going commercial

William Neely
and J. E. Swanson

In the last decade no secondary school department has changed so much as has the commercial department. But more change is necessary: the classic pattern of shorthand, typewriting, and a little accounting does not fit today's needs.

Before 1974 commercial students were in a buyer's market. Only a few noticed that there were fewer and fewer jobs for shorthand typists. Short-hand writers now exist at two levels—the very high speed writer, who is usually a confidential secretary, and the slow note taker, who rarely has to do any verbatim reporting. The old idea of "everybody a shorthand writer" is dead and the slow note taker is fast being replaced by the audio typist. According to *The Times* it now costs £5 to get out a letter dictated by an executive to his secretary.

Go-ahead commerce departments are building their programmes round audio equipment. As the first ordinary school in Britain to teach audio (we were beaten in the race by a school for the blind) we have always had a proprietorial interest in the subject. In teaching audio-typewriting we have found it pays to have a multiple-outlet system for the first term. This frees the teacher for supervision, checking typing faults, correction of posture, and for ensuring that the inevitable idler does not get the chance to idle. It is also a multi-channel set, for the pupils who have misused a lesson, or who have failed to keep up. The pupils learn that maximum volume is not necessarily optimum volume, with, we hope, some diminution of volume of translators when they are not like a variety of audio machines, so we like a variety of typewriters. A good typist should have experience on as many kinds of machine as possible. The only way to ensure this is to offer them this variety, and encourage them to



try every model. The acquisition of such a mixture of machines calls for selectivity by the head of department. He or she must go round suppliers, particularly at sales, just to see what is available.

Provided that we can train students in this way, there is no reason why a high percentage of the routine work of the general office cannot be undertaken by senior fifth and sixth-formers. Live work is the best teacher of all and it teaches responsibility, particularly relation to semi-confidential work.

Once a department has good typewriters, the next stage is to obtain the audio machines. It is important to have duplicators and stencil cutters, Thermoform machines and

the like available, but audio machines are more than important, they are vital. Unfortunately audio layouts are expensive. By the time a department has bought, say, a multi-channel console, one set, a dozen or so tapes, earphones, junction boxes and a foot or hand control there is little left in an initial grant. However, the basics can be taught and that is something.

Audio machines can be used for more things than audio. In short-hand classes we often have pupils with different devices. One group can listen to the teacher or transcribe, while the other is taking dictation through earphones. Another advantage of an audio unit is that it enables the department to use a tele-tech ringer. This is

essentially a three-way telephone set which teaches techniques and replaces the old TPs. There are no difficulties of installation, the whole apparatus is portable, and the communication is recorded and can be played back either through the telephone or through the loud-speaker.

A small printing press is also of use if it is wished to have headed paper for, say, a Mode 3 audio examination, or for practice work. We have also been in touch with a number of bodies who work with us, and have cut, on the electronic stencil cutter, a series of their headed paper for use by our fourth form, and on good paper for use by fifth and sixth forms.

Turning to accountancy, we should bear in mind that in the present business climate the number of well-paid staff required to administer such complications as VAT, PAYE and the like may well increase, whereas the luxury of a personal secretary may well be done away with except at the top.

The wages clerk, bank cashier, or income tax clerk of the late 1970s will be, in fact, a competent young person, well trained in making full use of the tools of the trade.

The commerce department is career-orientated, but in some cases subjects such as commercial accounts, social economics and economics have not been sufficiently focused on a specific end. Direction is important and must be backed by the tools of practical application, such as calculators, adding machines and ready reckoner.

A timeslot (second hand would be adequate) would be useful to familiarize pupils with the punch card system and help in working out pay hours and overtime. This becomes more important with the increasing popularity of flexible working hours in industry, with its complication of credit and debit hours and end of the month checks.

The method of working all these things out—and they are, of course, not matters of straight addition but include complex percentages to ascertain insurance and pension rates—will have been taught to the pupils, but the use of calculation to achieve speed and accuracy will not be learned in 10 minutes. They not only have to absorb how to add, subtract, multiply, divide, but how to utilize the storage facility of these machines.

The overhead projector is a useful piece of equipment for teaching accounts, and we have found it most useful in assisting the pupils to achieve neatness. Illustrations on a blackboard have a problem solved by entered and ruled off was always a messy business. By using a cell prepared as a sheet from one of the accounting books, the writing and rulings can be seen in their correct colour, neatly entered, and the whole concept is greatly clarified. The projector is also of great use in the teaching of shorthand, for similar reasons.

William Neely teaches at the High School for Girls, St. Mary's, and J. E. Swanson at Ladygrove Secondary School, both in Birmingham.

Courses for sources

Michael Gill

There is little need to emphasize the considerable increase in teaching local studies in both schools and colleges that has taken place recently. Such courses have been developed in response to different needs, but courses, primarily intended as an introduction to the concepts, sources and techniques of local studies have tended to predominate over courses aimed at the study of content.

Frequently these courses have involved a degree of interdisciplinary work by geographers and historians. In the determining the nature of the collaboration between the subject specialists that such courses develop clear and fundamental characteristics. The issue rapidly becomes itself this: whether local studies should develop as a separate discipline, or whether it should be conceived and introduced as a method of studying history or geography.

This college has developed a

course in local studies which is explained by the notion that geography and history are separate disciplines, but that the interaction between the two subjects adds the extra dimension which makes local studies both feasible and rewarding. We have two hours a week for three terms and the course, a minor one in the academic programme of the college curriculum, is divided into two. The first section, an introductory survey of sources, techniques and themes, allows a discussion of fundamental issues to be initiated. In the second part the students apply the techniques to a chosen area of study in order to produce a project which, although necessarily limited in scope, allows different techniques to be used in a local context.

Accepting from the outset that an investigation is bound to be selective, our prime concern was the availability and relative ease of analysis of source material, for such areas. This has meant concentration on eighteenth and nineteenth century sources, but this has allowed a variety of primary, secondary, cartographic and visual sources to be used. For example, students use microfilm copies of the nineteenth century census enumerators' books, which registers reports on health

and housing, the surveys, early Ordnance Survey maps, town plans and old photographs and prints. Collaboration with local record offices and libraries is essential, fieldwork in rural and urban settings, where the evidence of source material is compared with the modern landscape.

The first half of the course includes lectures and activity groups in which the sources are introduced and some appropriate study techniques demonstrated. Additional lectures develop fundamental themes which are used as a basis for the course: the most apposite are: population, settlement, health and housing, agriculture, industry and transport.

In the case of population studies, students are introduced to the simple aggregative analysis of the results of baptisms, marriages and deaths, the analysis of the mid-nineteenth century census, books and other supportive material such as trade directories. At an early stage in the course they discover the value of large-scale maps such as the Ordnance Survey, the OS 6 inch maps and 25 inch plans. This training in spatial awareness in the historic context is seen as one of the major contributions of geography to the

At the end of the first half of the course, students submit two pieces of written work: in one they are required to examine the uses and limitations of a chosen source; in the other they must discuss the essential background to their chosen theme of study.

This part is essential if they are to avoid parochialism. For example, a student intending to undertake a study of an aspect of population within a given area, would be expected in the first piece of work to show an awareness of the value, limits and use made by others of such sources as the census books. In the second a grasp of the essential demographic background both regionally and nationally would have to be demonstrated.

The project requires careful supervision, and here the geographer and the historian can make valuable contributions in terms of their individual subject skills. A student investigating an agricultural area will be able to get help from an historian for the political and economic context, the social factors and the economic context of capital availability, price fluctuations, etc. The geographer will be able to introduce the student to factors such as environmental conditions, regional patterns of agricul-

ture, analysis of cartographic sources and fieldwork techniques.

In this way the student can gain an insight into the work of each subject discipline, contributing to a theme which cannot be adequately studied within the framework of one subject. Joint teaching by a geographer and an historian helps students to become aware of processes such as urbanization and industrialization in order to combat the danger of excessive localization of inquiry. Furthermore, such combined teaching helps to ensure that spatial concepts and that of change through time are developed and seen in relation to each other.

The essential aim of the course is to allow students to experience an integrated study which, by the use of selected themes, explores the frontiers between geography and history. This means that the study is truly interdisciplinary: the two subjects provide distinctive contributions but merge in the practical application of techniques and knowledge in a particular theme. In this college local studies does not seek to exist separately. Rather it is based on the contribution that each can make to a joint study.

Michael Gill teaches at the Northern Counties College, Newcastle upon Tyne.

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SEX
DISCRIMINATION ACT
December 29 1975

No job advertisement which indicates or can reasonably be understood as indicating an intention to discriminate on grounds of sex (e.g. by inviting applications only from males or only from females) may be accepted, unless—

(1) the job is for the purpose of a private household or
(2) it is in a business employing less than six persons or
(3) it is otherwise exempted from the requirements of the Sex Discrimination Act

A statement must be made at the time the advertisement is placed saying which of the exceptions in the Act is considered to apply.

Primary Education

Headships
AVON COUNTY
ST. MARTIN'S J.M. SCHOOL
Worcester, Avon
Applications invited for the HEAD-
SHIP of this primary school.
The successful candidate will be
responsible for the school and will
be required to have a minimum of
10 years' experience in primary
education. Salary £20,000 per
annum. Applications should be
sent to the Director of Education,
Avon County Council, 100, Broad
Street, Bristol, BS1 2JF.

CAMBRIDGESHIRE
CAMBRIDGE AREA
HEADSHIP
Applications invited for the post
of HEADSHIP of a primary school
in the Cambridge area. The
successful candidate will be
responsible for the school and will
be required to have a minimum of
10 years' experience in primary
education. Salary £20,000 per
annum. Applications should be
sent to the Director of Education,
Cambridgeshire County Council,
100, Broad Street, Cambridge, CB2 3RQ.

CORNWALL
EDUCATION COMMITTEE
HEADSHIP
Applications invited for the post
of HEADSHIP of a primary school
in the Cornwall area. The
successful candidate will be
responsible for the school and will
be required to have a minimum of
10 years' experience in primary
education. Salary £20,000 per
annum. Applications should be
sent to the Director of Education,
Cornwall County Council, 100, Broad
Street, Cornwall, Cornwall, PL1 2JF.

KENT
COUNTY COUNCIL
EDUCATION COMMITTEE
HEADSHIP
Applications invited for the post
of HEADSHIP of a primary school
in the Kent area. The
successful candidate will be
responsible for the school and will
be required to have a minimum of
10 years' experience in primary
education. Salary £20,000 per
annum. Applications should be
sent to the Director of Education,
Kent County Council, 100, Broad
Street, Kent, Kent, ME1 2JF.

MAIDSTONE DIVISION
EDUCATION COMMITTEE
HEADSHIP
Applications invited for the post
of HEADSHIP of a primary school
in the Maidstone division. The
successful candidate will be
responsible for the school and will
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Maidstone Division, 100, Broad
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Deputy Headships

Senior Masters/
Mistresses

BERKSHIRE
EDUCATION COMMITTEE
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No job advertisement which indicates or can reasonably be understood as indicating an intention to discriminate on grounds of sex (e.g. by inviting applications only from males or only from females) may be accepted, unless—

(1) the job is for the purpose of a private household or
(2) it is in a business employing less than six persons or
(3) it is otherwise exempted from the requirements of the Sex Discrimination Act

A statement must be made at the time the advertisement is placed saying which of the exceptions in the Act is considered to apply.

Other Posts on
Scale 2 and above

BERKSHIRE
EDUCATION COMMITTEE
(READING DISTRICT)
DEPUTY HEADSHIP
Applications invited for the post
of DEPUTY HEADSHIP of a primary
school in the Reading district. The
successful candidate will be
responsible for the school and will
be required to have a minimum of
10 years' experience in primary
education. Salary £20,000 per
annum. Applications should be
sent to the Director of Education,
Berkshire Education Committee,
100, Broad Street, Reading, RG1 2JF.

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BERKSH



SOCIAL SERVICES DEPARTMENT
DERWENT HOUSE ASSESSMENT CENTRE FOR GIRLS
DERWENT ROAD, STONEYCROFT, LIVERPOOL L3 2AW

SENIOR ASSISTANT THIRD-IN-CHARGE

22,807-23,282, plus £219 special responsibility allowance

The successful applicant for the senior residential post will have considerable experience and will be qualified in Residential Child Care, Teaching or Social Work. This is a challenging and rewarding opportunity for an officer with their own responsibility to gain wider knowledge of residential care. A deduction of £372 per annum will be made in respect of residential emoluments. Application forms may be obtained from the Director of Social Services, 26 Hulton Garden, Liverpool L3 2AW. Closing date: 16th January, 1978.



GLASGOW Sub-Region
Post Ref. No. GW/EDU/147

DEPUTY SENIOR CAREERS OFFICER

GLASGOW

Salary Scale: £3,474-£3,825 Grade: AP3

Assisting the Senior Careers Officer in developing and co-ordinating work of the area Careers Team who are responsible for giving vocational guidance to pupils in Secondary Schools; will be involved also in some administrative duties.

Applicants must be experienced in work of Careers Service and should hold degree of British University and/or equivalent Diploma in Careers Guidance. Full details and application forms may be obtained from the Assistant Director of Manpower Services, 21 Gordon Street, Glasgow, G1 3PS, to whom completed forms should be returned by 12th January, 1978. R. M. O. McCULLOCH, Director of Manpower Services.

education awards officer

Higher and Further Education
£4,880-24,992

We require a suitably qualified and experienced person for this interesting senior post, able to supervise the work of the Department's Higher Education Team. The main responsibility of the Team is the administration of awards to some 6,500 students in higher and further education. The officer appointed will also have a significant counselling role in resolving personal problems of award-holders and in advising students and their parents on awards facilities by interview and by participation in careers and other conventions in schools and colleges.

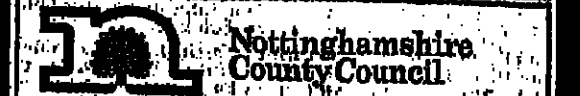
Applicants should have graduate and/or professional qualifications, together with experience in one or more fields such as teaching, social work, careers guidance, accountancy or relevant administration. A knowledge of Awards Regulations and the higher/further education system would be an advantage; sound personal attributes for leading a team of fourteen staff and fostering good relations with members of the public are essential. Closing date for applications 16th January, 1978.

educational psychologist

£3,225-25,570

We require a suitably qualified person for this post in the Mansfield District, to work with the Senior Educational Psychologist in developing the new School Psychological Service in this area. The post also offers scope for special interest work with the district and with the Child Guidance Service. An essential user allowance will be available to the successful applicant. Closing date for applications 30th January, 1978.

In each case, generous assistance will be given with the expenses incurred in moving houses in accordance with the Authority's scheme. Application forms and further details for officer post are available from the Director of Education (ADM/1) at County Hall. Please quote post title and Ref. 145.



ADMINISTRATION
Local Education Authority continued

HAMPSHIRE

CAREERS SERVICE

CAREERS ADVISOR

Southampton

Up to £3,384

Applications are invited from suitably qualified persons to fill the post of Careers Advisor in the Southampton Division. The successful candidate will be a member of the Southampton Division team and will work in schools in the district.

Salary grade is AP 3-1. A car allowance will be paid and pension will be available. The successful candidate will be a member of the Southampton Division team and will work in schools in the district.

Please quote reference number 2433/AA when obtaining application forms and application forms should be returned to the Director of Education, Southampton, by 16th January, 1978.

HAMPSHIRE

CAREERS SERVICE

SPECIALIST ADVISOR

WORKING PART OVERSEAS

Southampton

Up to £3,384

Applications are invited from suitably qualified persons to fill the post of Specialist Advisor in the Southampton Division. The successful candidate will be a member of the Southampton Division team and will work in schools in the district.

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WOLVERHAMPTON
BOROUGH COUNCIL

EDUCATION DEPARTMENT

SENIOR CAREERS OFFICER

Salary Grade: A.P.3

(£3,826 to £4,999)

Applications are invited from suitably qualified persons to fill the post of Senior Careers Officer for the area of the Borough of Wolverhampton. The successful candidate will be a member of the Wolverhampton Division team and will work in schools in the district.

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Miscellaneous

ATLAS EDITOR

Applications are invited from suitably qualified persons to fill the post of Atlas Editor for the area of the Borough of Wolverhampton. The successful candidate will be a member of the Wolverhampton Division team and will work in schools in the district.

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